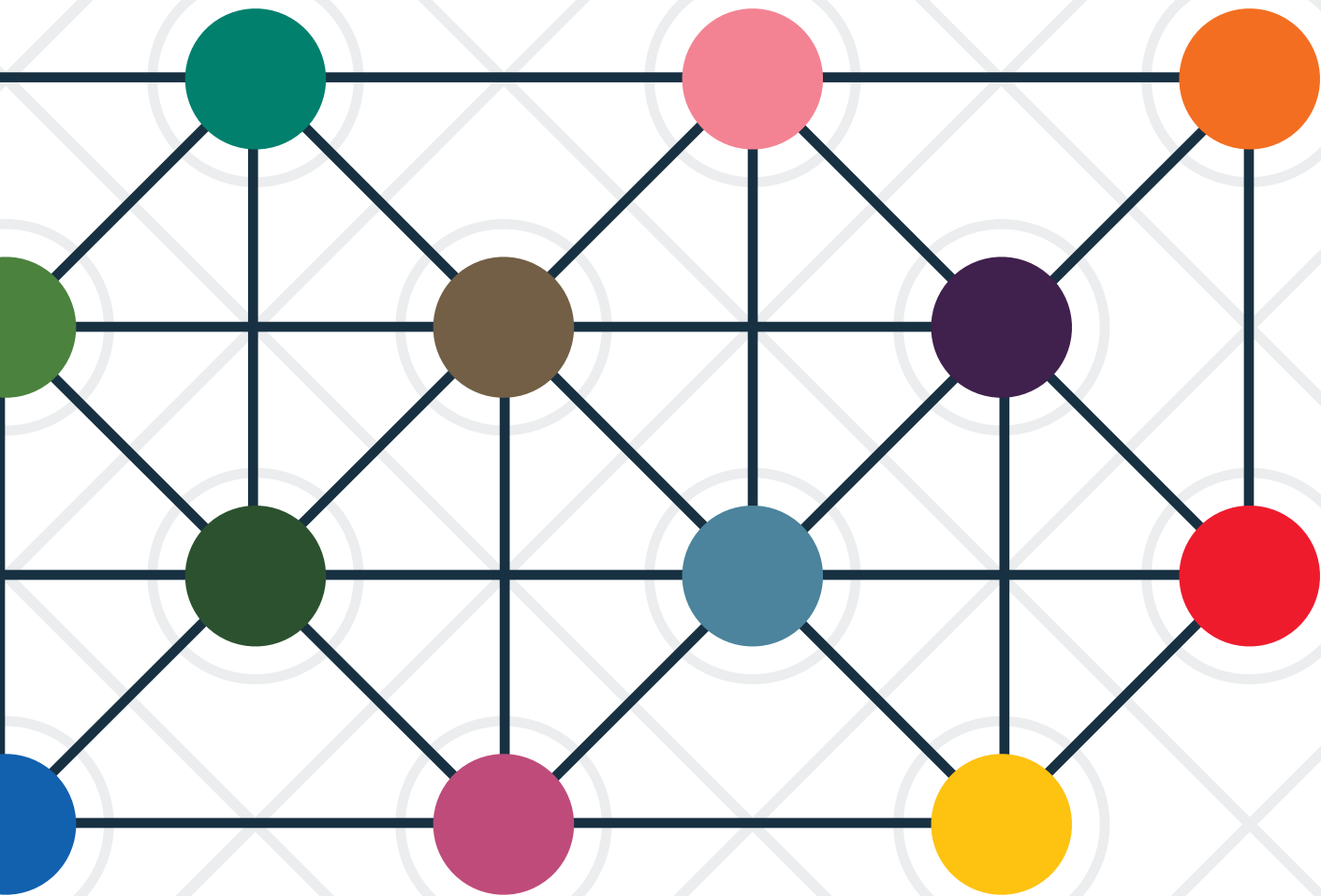




ALABAMA DEPARTMENT OF PUBLIC HEALTH

Annual Report 2017



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A LETTER FROM THE STATE HEALTH OFFICER

The Honorable Kay Ivey
Governor of Alabama
State Capitol
Montgomery, Alabama 36130

Dear Governor Ivey:

It is my pleasure to present to you the Alabama Department of Public Health's (ADPH) Annual Report for 2017. Each year presents us with unique challenges in our mission to promote, protect, and improve the health of the individuals and communities of Alabama, and 2017 was no exception. However, I am proud to say that our talented and dedicated staff continues to meet each challenge with the utmost compassion, integrity, and professionalism.

Nothing exemplifies this approach better than the department's achievement of national accreditation by the Public Health Accreditation Board as of June 6, 2017. The national accreditation program sets standards for the nation's nearly 3,000 governmental public health departments, emphasizing the need to demonstrate accountability and credibility to the public they serve. ADPH was awarded accreditation upon the completion of a rigorous 3-year process designed to ensure our procedures and processes met or exceeded a set of quality standards and measures. We believe the information gathered during this process will enable us to strengthen the department and improve our ability to serve our citizens going forward.

An area which continues to demand our attention is the opioid crisis currently affecting Alabama and much of our nation. I am proud to be part of the Alabama Opioid Overdose and Addiction Council, and I look forward to helping the department serve as a leading entity in addressing this crisis among our population. I believe our efforts to strengthen the Alabama Prescription Drug Monitoring Program, along with our other prevention, intervention, and education initiatives will have a significant and positive impact.

Unfortunately, infant mortality continues to be a significant problem for our state. Alabama's infant mortality rate increased in 2016 to 9.1 infant deaths per 1,000 live births. This rate – the highest since 2008 – is a stark reminder that many of the challenges facing pregnant women in Alabama remain. We are committed to addressing these challenges – which include access to health care, racial disparities in available health care, and premature births – with a strategic plan executed at the community level. Among the factors we will focus on are improved education about tobacco and drug use during pregnancy; safe sleep practices; and increasing the time between births to a minimum of 18 months. In addition, we will continue to educate ourselves about the factors that play a role in infant survival so that we can better address those factors in the years to come.

The year 2017 saw a major reorganization within the department, as the organization of our county health departments moved from the "area" system that had been in effect for years to a more tightly-focused grouping of eight public health districts. This was a complicated process, and I commend our district staff and, particularly, our county-level employees, who worked tirelessly to maintain high levels of patient service while undergoing the sometimes painful process of reorganization and, in some instances, relocation. We believe this new system will help us greatly in developing the services and programs specific to the needs of patients in those individual districts.

The department continues to prepare for the implementation of our electronic health record clinic management system, or EHR, which will be in use by the summer of 2018. Our EHR system will simplify the process of capturing patients' medical histories, immunization records, lab results, and more by combining a number of systems under one umbrella. This new paperless system promises a more streamlined approach to health care, and should provide tremendous benefits to health care providers and their patients throughout the state.

We were excited to end 2017 with the announcement of plans to build a new state health laboratory in Prattville. This new facility will enable us to utilize cutting edge technology in everything from genetic disorder screening to outbreak testing and investigation. We believe that the work this lab will enable us to do will positively impact nearly every Alabama citizen.

As you will see in this report, the accomplishments of 2017 were many, but several challenges remain. ADPH will continue to make the tough decisions and do the hard work required to improve the big picture of Alabama's health in 2018 and beyond. We will also continue to address the day-to-day health concerns facing our citizens. We will continue to urge our citizens to stop using tobacco, to get their vaccinations, to eat healthy, to exercise, and to pursue healthier overall lifestyles that will benefit them in the long run.

Sincerely,



Scott Harris, M.D., M.P.H.
State Health Officer



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Value Statement

The Alabama Department of Public Health believes that all people have a right to be healthy. Our core values are the provision of high quality services, a competent and professional workforce, and delivering compassionate care.

Authority

Alabama law designates the State Board of Health as the advisory board to the state in all medical matters, matters of sanitation, and public health. The State Committee of Public Health meets monthly and is authorized to act on behalf of the State Board of Health. The State Health Officer is empowered to act on behalf of the State Committee of Public Health when the Committee is not in session.

More than 140 years ago, medical leaders in Alabama advocated constitutional authority to oversee matters of public health. The purpose of the authority was to preserve and prolong life; to plan an educational program for all people on rules which govern a healthful existence; and to determine a way for enforcing health laws for the welfare of all people.

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CENTRALIZED BILLING UNIT

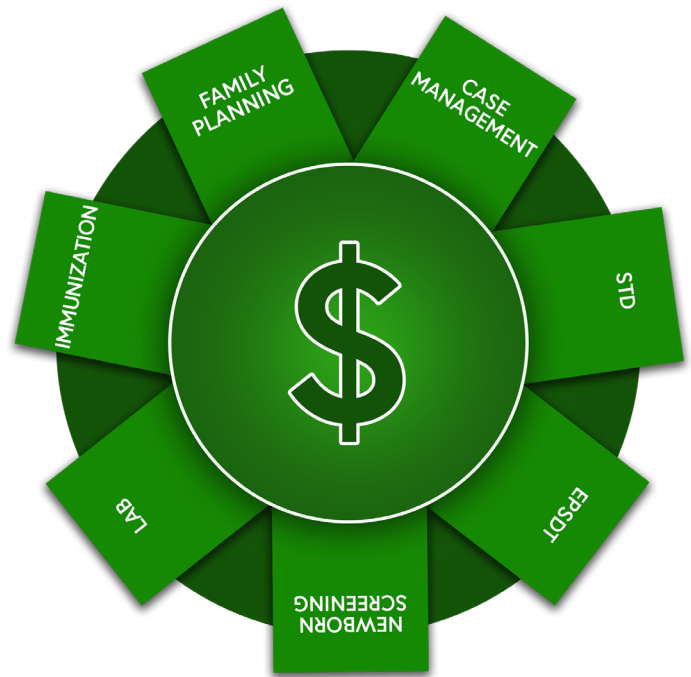
The Centralized Billing Unit (CBU) was created in May 2017 located within the General Operations Division. CBU's goal is to provide statewide county support for correction of claims, resubmissions, and credits to recover the maximum amount of revenue owed to the department. CBU provides administrative services to ensure compliance and integrity with all payer sources as well as local, state, and federal requirements.

CBU is responsible for the following:

- Ensuring provider enrollment
- Re-enrollment
- Reactivation of provider status
- Serving as liaison for all payer sources including private and state agencies
- Utilizing current procedural terminology coding
- Billing contracts
- Credentialing
- Other reporting analysis and trends

CBU continues to look for opportunities for revenue expansion and growth while keeping staff trained and updated on all billing changes. The unit supports effective and efficient work processes to ensure accurate billing is done and error rates are reduced. CBU will soon utilize a new electronic practice and revenue management system for clinical and laboratory services.

Figure 1. Programs Assisted by CBU to Maximize Revenue



BUREAU OF CHILDREN'S HEALTH INSURANCE

The Bureau of Children's Health Insurance administers the Children's Health Insurance Program (CHIP). CHIP provides comprehensive health coverage to eligible children through a separate program known as ALL Kids. CHIP has successfully enrolled tens of thousands of eligible children for 20 years and since the program's initiation, the uninsured rate for children in Alabama has dropped from 20 percent to 2.4 percent.

The bureau administers CHIP according to federal requirements and was fully federally funded for fiscal year 2017. As a result of provisions in the Affordable Care Act, in addition to the ALL Kids program, CHIP now funds two groups of Medicaid-eligible children. These groups are children ages 6-18 with family income from 100 to 141 percent of federal poverty level (FPL) and adolescents from 14-18 with family income from 18 to 100 percent FPL. Collaborative work with Medicaid is ongoing in efforts to keep the system and application streamlined.

CHIP has made many improvements since its beginning in 1997. Successes from 2017 include meeting the application processing time goal of completing under 10 days, meeting the call center abandonment rate goal of below 5 percent, and continued changes to the eligibility system to make processing more efficient and the online application more user-friendly for applicants.

**Figure 2. Fiscal Year 2017 Enrollment Figures
(As of September 2017)**

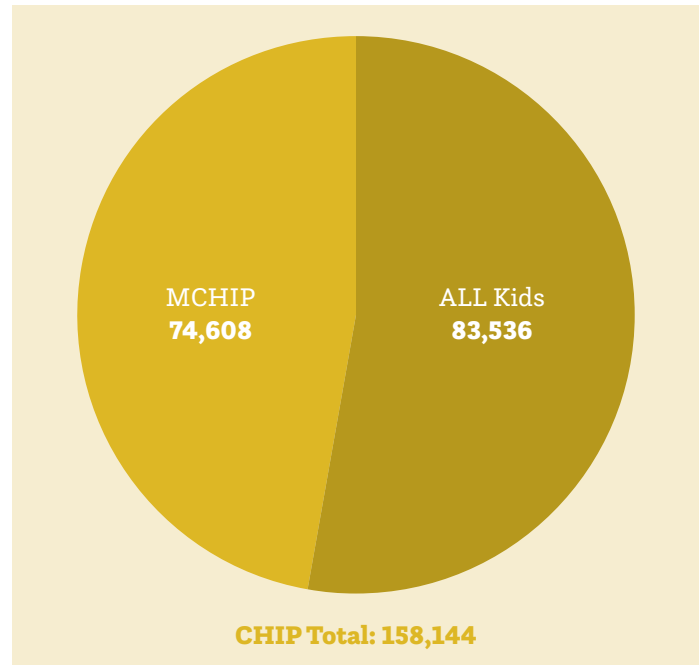
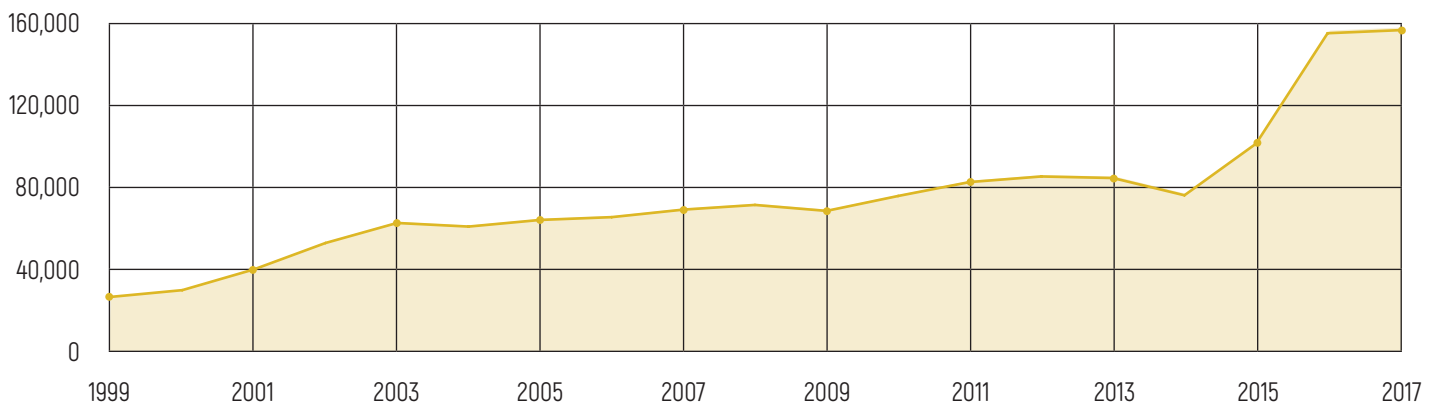


Figure 3. CHIP Enrollment History



*2014 began funding to Medicaid eligible children.

BUREAU OF CLINICAL LABORATORIES

The mission of the Bureau of Clinical Laboratories (BCL) is to improve and protect Alabama residents' health through laboratory science. The laboratory consists of the Administration, Administrative Support Services, Clinical Chemistry, Microbiology, Newborn Screening, Quality Management, Sanitary Bacteriology/Media, STD, and Mobile Laboratory divisions. Testing is funded through Medicaid receipts and federal grants.

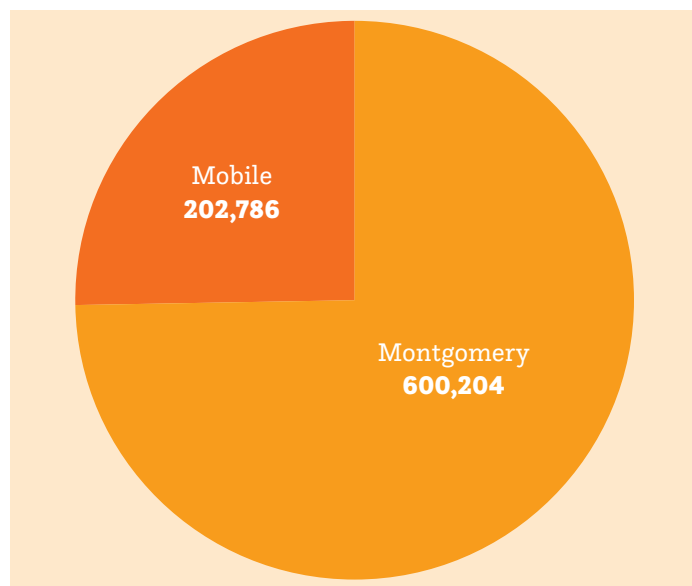
Laboratory Quality

Laboratorians work diligently to ensure the best science supports public health. This includes identifying and matching a disease-causing organism to a source, determining an allele as a metabolic error, or monitoring for the presence of harmful algae in the gulf. Staff is committed to quality and is credentialed through various programs at the Centers for Disease Control and Prevention (CDC), the U.S. Food and Drug Administration (FDA), the Environmental Protection Agency (EPA), and Clinical Laboratory Improvement Amendments (CLIA) to ensure quality test results. The BCL is in its third year of a 5-year, \$1.5 million FDA grant to become International Organization for Standardization (ISO) 17025 accredited. This comprehensive standard demonstrates that the designated laboratory values quality and has taken the necessary steps to ensure that testing results are accurate and reliable.

Distribution of Clinical Specimens and Environmental Specimens Received

The BCL offers laboratory testing services through an array of technical specialties and consists of a main laboratory in Montgomery and a specialty testing laboratory in Mobile. A total of 1,885,636 laboratory tests were performed this year for the 802,990 specimens received. The distributions of specimens are depicted in the accompanying figures. The number of specimens received and tests performed were not significantly different from the the past year.

Figure 4. 2017 Distribution of Clinical Specimens



Laboratory Information Management System (LIMS)

The BCL ChemWare Horizon LIMS continues to evolve as new instruments are interfaced. The number of clinical and environmental results reported electronically to partners, including departmental programs, law enforcement, the CDC, and the Alabama Department of Environmental Management (ADEM) continues to increase. Rabies testing results sent to program managers and environmentalists, which include creating alerts for cases which might require immediate action, are automated to improve reporting time. Electronic ordering and reporting reduces data-entry errors, decreases turnaround time, and allows for near real-time reporting. The LIMS for the newborn screening laboratory testing does not receive electronic requests, but does contain reporting tools that integrate newborn screening results to help facilitate billing, rapid follow-up, and intervention. The system includes a searchable web-based interface that allows providers to search for their entity's lab results. More than 80 percent of the BCL's clinical and environmental samples are reported back to their ordering providers via some form of electronic means. The laboratory is in final stages of implementing a revenue cycle management system to perform client billing. Efforts continue to encourage testing providers to provide all necessary diagnosis codes, national provider identifiers, and insurance information required for the billing of laboratory services. This system should allow the BCL to maximize its revenue sources while improving both efficiency and quality of testing results.

Clinical Chemistry Specimens Processed and Analyzed

The Clinical Services Branch performs routine chemistry profiles, hepatitis B screenings, complete blood counts, CD4/CD8 T-lymphocyte subset enumeration, and quantitative polymerase

Figure 5. 2017 Distribution of Environmental Specimens

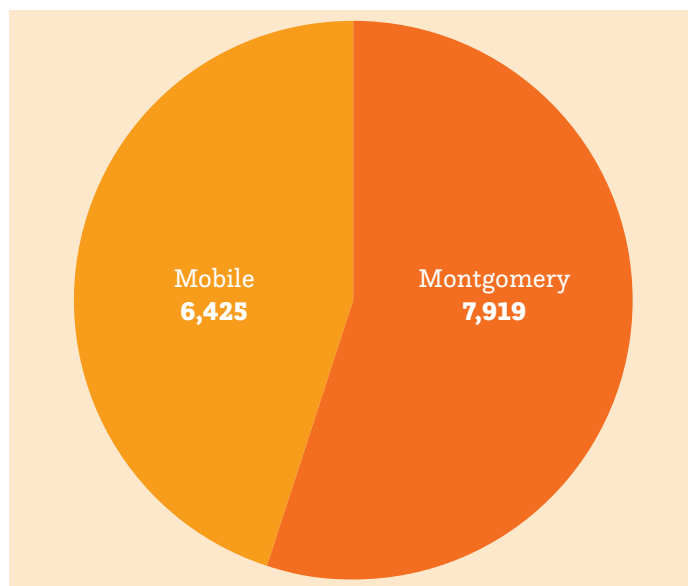
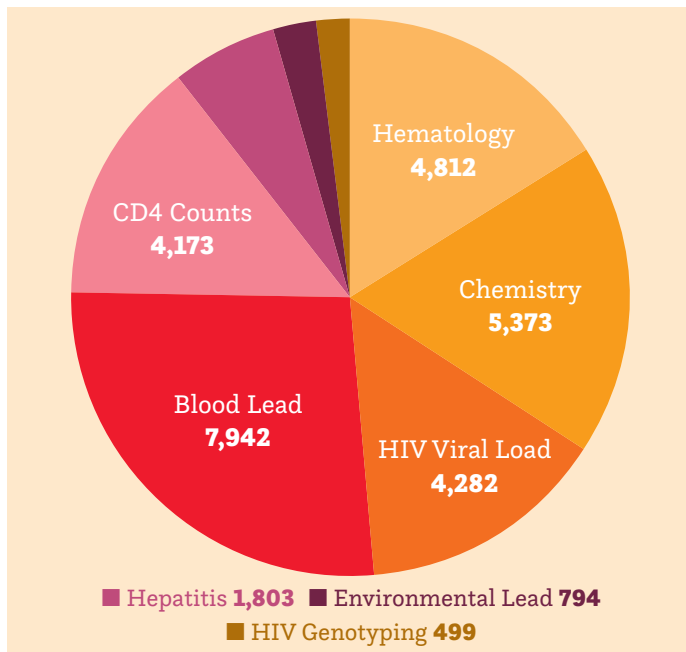


Figure 6. Clinical Chemistry Specimens Processed and Analyzed, Fiscal Year 2017

chain reaction (PCR) for HIV viral loads and HIV genotype testing from which surveillance information is provided to the CDC for genotype sequence genomes. Specimens are submitted from county health departments, federally qualified health centers, and community-based HIV treatment programs to support the clinical management of their patients. This branch also assists the Department of Human Resources with its Temporary Assistance to Needy Families program by conducting drug screening for applicants in accordance with Alabama Act 2014-438, Senate Bill 63, Drug Testing for Welfare Recipients. The Lead Branch conducts lead testing in support of the department's Childhood Lead Program. The division processed and analyzed 29,678 specimens during fiscal year 2017.

Infectious Disease Testing - Microbiology

Outbreaks: The Emerging Infectious Disease (EID) Branch continued to use syndromic panel testing to streamline and expedite outbreak detection. The gastrointestinal panel was used to screen outbreak

samples of unknown etiology for the causative agent before proceeding with food testing or triaging for serotyping or subtyping. The panel detected 88 outbreaks identifying the following agents: norovirus, sapovirus, *Salmonella*, *Cryptosporidium*, *Clostridium difficile*, and enteropathogenic *Escherichia coli* (EPEC). The respiratory panel was used to detect 31 non-influenza respiratory outbreaks for the following viruses: adenovirus, coronavirus, human metapneumovirus, rhino/enterovirus, and respiratory syncytial virus.

As participants of PulseNet (national laboratory foodborne illness network), the EID Branch used pulsed field gel electrophoresis (PFGE) analysis to aid in Alabama cluster investigations of *Campylobacter jejuni*, *Shigella flexneri*, *Listeria monocytogenes*, and *Salmonella* outbreaks this year. Sample analyses contributing to 14 national outbreaks were posted to the PulseNet International Database. PFGE was also used to help two Alabama hospitals with infection control investigations of a Methicillin-resistant *Staphylococcus aureus* (MRSA) and *Serratia marcescens* outbreak. EID has implemented whole genome sequencing and plans to begin sequencing all enteric isolates.

Of the 103 norovirus specimens tested, 31 outbreaks were reported, 14 of which were identified by sequencing and submissions to CaliciNet. One microbiologist went to CaliciNet training at the CDC and received certification. In addition to CaliciNet sequencing, 484 bacterial and mycobacterial specimens were identified using 16S sequencing. The EID confirmed 7 malaria cases, serotyped 62 *Haemophilus influenzae*, and serogrouped 5 *Neisseria meningitidis*. In a dramatic increase from the previous year, 472 specimens were tested for influenza virus, and 58 were tested for *Bordetella* species. Zika virus remained a high priority for EID. A total of 388 specimens were tested with the Zika MAC ELISA with 8 presumptive positive submitted to the CDC for plaque-reduction neutralization testing confirmation; 691 specimens were tested with the reverse transcription-PCR Trioplex Arbovirus panel, finding 5 positives for the Zika virus.

The Conventional Microbiology Branch implemented testing for Carbapenem-resistant Enterobacteriaceae (CRE) in conjunction with the CDC. CRE is a growing concern in health care settings because these multidrug-resistant bacteria can cause serious and difficult-to-treat infections. The branch has been acquiring equipment and training to increase its ability to rapidly screen food for disease-causing bacteria. The branch has also participated in ten foodborne outbreaks, the most interesting of which was associated with *Brucella abortus* in unpasteurized milk that was made into butter.

Preparedness: The Biological Terrorism (BT) Laboratory collaborated with Alabama's National Guard 46th Civil Support Team and local Federal Bureau of Investigation staff to conduct training for the Maxwell Air Force Base Emergency Response and Hazardous Materials (HAZMAT) group. The training was hosted at the base's fire department where 25 participants attended over the course of 2 days. An incident at an Alabama research facility required testing of two employees. Although it was determined that the employees were not infected with agents manipulated at the workplace, the experience allowed the department to build a relationship with the research facility and assist with the redevelopment of the facility's response plans. The BT Laboratory also responded to two potential

Figure 7. PulseNet 2017

<i>Campylobacter</i>	15
<i>E. coli</i> O157	5
<i>E. coli</i> non-O157	20
<i>Listeria</i>	6
<i>Salmonella</i>	809
<i>Shigella</i>	57
<i>Shigella flexneri</i>	13
<i>Vibrio cholerae</i>	1
<i>Vibrio parahaemolyticus</i>	1

Middle Eastern Respiratory Syndrome–Coronavirus patients and three suspected cases of botulism. The BCL also received 11 specimens, including 1 environmental sample, to rule out agents of bioterrorism; no agents were detected in any samples.

The Chemical Terrorism (CT) Laboratory participated in a simulated sample reporting exercise and passed the specimen packaging and shipping exercise in 2017. The CT Laboratory is near completion in the process of validating testing for screening of ochratoxins in baby cereal.

Newborn Screening (NBS)

State law mandates that every newborn is tested for certain metabolic, endocrine, hematological, and other genetic disorders and that testing be performed at the BCL. An initial screening is performed at birth, and a second screening is recommended at 2 to 6 weeks of age. Alabama's birth rate is approximately 62,000 annually. The laboratory screens approximately 150,000 specimens yearly for 45 different disorders. This translates to approximately 6 million total tests performed annually.

The NBS Laboratory follows the recommendation of the National Advisory Committee on Heritable Disorders in Newborns and Children to refer to the Recommended Uniform Screening Panel as guidance for adding tests to each state's NBS panel. The lab is currently implementing testing that will aid in the diagnosis and treatment of Severe Combined Immunodeficiency Disorder.

Tuberculosis (TB) and Fungal Infections

The Mycobacteriology Branch received 8,953 specimens for isolation and identification of *M. tuberculosis* complex as well as species of non-tuberculous mycobacteria (NTM). Using PCR-based technology, the TB Laboratory is able to provide rapid results to health care providers by identifying new smear positive patients within 2 hours of beginning the test. The TB Laboratory also works closely with TB Control officials by providing genotyping information through the Michigan Department of Community Health. This information aids in determining the origins of outbreaks. The PCR-based technology and genotyping information has been an asset during outbreak investigations. The TB Lab uses Matrix Assisted Laser Desorption/Ionization-Time of Flight (MALDI-TOF) technology to rapidly identify NTM.

The Mycology Branch reported 20 systemic yeasts (i.e., *Cryptococcus neoformans* and *Cryptococcus* species) and 15 systemic fungi (i.e., *Blastomyces dermatitidis*, *Coccidioides immitis*, and *Histoplasma capsulatum*). Promptly recognizing systemic yeasts and molds early is essential to enabling doctors to properly care for patients. A total of 3,327 specimens were received in this branch from county health departments and private providers.

HIV and Sexually Transmitted Disease (STD) Testing

The total number of specimens tested in 2017 increased by 3 percent. The incidence rates for chlamydia, gonorrhea, trichomoniasis (CT-GC-TV), HIV, and syphilis remained unchanged for women and men attending adult health and STD clinics. The STD Testing Division received 240,332 specimens and performed 436,085 tests. The CDC's reverse algorithm is followed for syphilis testing. The initial screening

test for syphilis is a treponemal IgG/IgM antibody test. If the screen is reactive, a non-treponemal test is used to determine past or recent infections. An enzyme immunoassay antigen/antibody test is used to screen for HIV infections. When the HIV screen is positive, an antibody or nucleic acid test is used to confirm the infection. CT-GC-TV infections are detected using a nucleic acid test. Although the testing assay remained the same, the laboratory replaced the Hologic Tigris instruments with Hologic Panther systems to allow more efficiency and versatility in CT-GC-TV testing.

Mobile Division Laboratory

Shellfish/BEACH/Harmful Marine Phytoplankton Branch

The Mobile Division Laboratory completed its collaborative efforts to assist the Georgia Department of Conservation and Natural Resources with testing oyster growing water upon the successful certification of the Georgia Department's laboratory in May. The laboratory continued harmful algal bloom (HAB) analysis and participated in conferences to maintain relationships with Gulf of Mexico states and the National Shellfish Sanitation Program. Laboratory staff submitted an article for publication to the Association of Public Health Laboratories regarding HAB programs. As the laboratory continues to seek ISO17025 accreditation, crab meat analysis continues as the laboratory works to improve methodology and equipment automation.

Mobile Division Clinical Branch

In collaboration with the Montgomery STD Division, the Mobile Division performs CT-GC-TV as well as syphilis testing. The CT-GC-TV Branch performed 161,778 tests from health care providers. The Syphilis Branch tested approximately 36,511 specimens in accordance with the CDC's diagnosis and treatment algorithm. The Urine Culture and Sensitivity Branch analyzed 1,377 specimens for potential pathogens and antimicrobial sensitivity. As at the Montgomery laboratory, the testing instruments were updated to improve efficiency and versatility in CT-GC-TV testing.

Mobile Division Environmental Testing

The Drinking Water Section tested 4,488 samples for public or community systems and private wells.

Sanitary Bacteriology/Media Division

The Sanitary Bacteriology/Media Division tests dairy products, public and private water, fluoride samples, and prepares media used by both the county health departments and the BCL. Testing was conducted on 1,576 dairy samples to include raw producer and tank truck samples as well as finished dairy products. Testing was also performed on 1,011 fluoride samples, and the laboratory tested 4,070 public and private water samples. Working with ADEM, 11 public water utility laboratories were inspected for compliance with state and federal regulations.

The Media Section made a total of 3,573 liters of media, which poured 22,194 Petri plates, 140,832 tubes, and 4,225 flasks in support of the Newborn Screening, Microbiology, and Sanitary Bacteriology (Milk and Water) programs. Working with the FDA, four milk laboratories were inspected for compliance with state and federal regulations.

Rabies

The Mobile Rabies Branch analyzed 297 animals reporting 7 positive for the rabies virus. The Montgomery Rabies Branch tested 1,473 animals of which 39 were positive for the rabies virus. The most notable specimen came from Hoover in Shelby County. This case involved up to eight people that were bitten by a cat. The family feeding the cat reported they saw it get into a fight with a raccoon the week before it became symptomatic.

All veterinary technicians and the veterinarian who treated the animal were exposed to this cat through bites, scratches, and saliva. This specimen tested positive for rabies and was sent to the CDC for typing per laboratory protocol. Results were positive for the Southeastern Raccoon Rabies Strain Variant. All parties involved with this case received rabies post-exposure prophylaxis treatment and are doing well.

OFFICE OF CLINICAL MANAGEMENT AND PRACTICE

Clerical

Public health clerical staff provide professional assistance in the daily operations of county health departments and in the daily functions of the districts and central office. Staff serve in a variety of roles including front desk receptionist, intake clerk, home health clerk, and office manager. Approximately 450 administrative support staff are employed by the department, and each is vital to the agency's ability to meet the needs of the citizens of Alabama.

Community Affairs

The department established the Office of Community Affairs in 2015 to address health care transformation and its impact on communities, programs, and resources. Better health for populations, better quality care for individuals, and lower per capita costs was the framework developed for health care transformation.

The Office of Community Affairs works to identify ways the department can partner with other community entities to ensure poor social determinants of health and risky health behaviors are addressed by connecting programs, populations, and resources. The office focuses on working across multiple organizations and through stakeholders to address the complex health concerns of Alabama citizens. These include enhancing appropriate access to care through strengthening transportation policy and supporting telehealth, especially for residents of rural areas.

Nursing

The mission of Public Health Nursing is to assure conditions in which individuals, families, and communities can be healthy utilizing the unique expertise of public health nurses to assess, plan, and implement programs which promote health and prevent disease. The department employs 809 nurses who provide family planning, child health, and preventive and treatment services for disease control. Public health nurses are active in the community through involvement in health fairs and other educational opportunities.

The Alabama Department of Public Health is an approved provider of continuing nursing education by the Alabama State Nurses Association. In 2017, over 3,000 participants earned 185 continuing education units through 44 programs that were offered.

Social Work

The Division of Social Work staff serve as members of a multidisciplinary team of professionals, skilled in using social work values, knowledge, and community resources to promote positive health outcomes, while respecting personal choice and promoting the health and well-being of individuals, groups, and communities. Public health social workers act as liaisons within their respective communities, educating and advocating for changes to improve poor outcomes related to social determinants of health.

The division is an approved provider of Social Work Continuing Education by the Alabama Board of Social Work Examiners, and during 2017 provided social work continuing education credit for more than 70 programs, both onsite and via satellite.

The department employs approximately 200 social workers who provide care in county health department clinics, physician offices, the home, or are responsible for programmatic oversight in the county, district, or central office. Social workers provide direct service to a multitude of Alabamians in a variety of settings and programs within the department including Plan First, Patient First, Elevated Lead, Metabolic Care Coordination, Newborn Hearing Screening, Home Health, Telehealth, Wisewoman, Suicide Prevention, Prenatal Education, Adolescent Abstinence Education, Maternity Care Coordination, HIV Care Coordination, Tuberculosis, Sexually Transmitted Diseases, Diabetes Self-Education, Alabama Personal Responsibility Education Program, and serve on several committees at the local level using the Collective Impact framework to address deeply entrenched and complex social problems that negatively impact the communities of Alabama.

BUREAU OF COMMUNICABLE DISEASE

The mission of the Bureau of Communicable Disease is to prevent and control designated communicable diseases and illnesses in Alabama. The bureau consists of the following divisions: HIV/AIDS Prevention and Care, Immunization, Infectious Diseases and Outbreaks, Sexually Transmitted Diseases, and Tuberculosis Control.

HIV/AIDS Prevention and Care

The mission of the HIV/AIDS Prevention and Care Division, in collaboration with community partners, is to reduce the incidence of HIV infections, increase life expectancy for those infected, and improve the quality of life for persons living with or affected by HIV.

Currently, 14,155 Alabama residents are known to be living with HIV. An estimated 1 in 6 people living with HIV in Alabama are unaware of their infection, suggesting 16,851 Alabama residents may be infected with HIV. During 2016, the most recent year data are available, 672 newly diagnosed HIV infections were reported among Alabama residents. This number is an underestimate, as it does not account for individuals unaware of their status. There are persons living with HIV in every county in Alabama, and the number continues to increase. In 2016, more HIV cases were diagnosed in Jefferson County than any other county. However, the highest rate of HIV per 100,000 residents was greatest in Montgomery County. In Jefferson County, the rate of HIV was 21.2 cases per 100,000 residents compared to a rate of 41.1 cases per 100,000 residents in Montgomery County.

In response to the growth in cases, the division continues to collaborate with providers and people living with HIV. The HIV Prevention and Care Planning Group (HPCG) meets quarterly to discuss the quality of HIV prevention events and treatment services in Alabama. Improving access to medical care is an ongoing priority. The HPCG members represent communities from across the state. These valued members create, replicate, and implement strategies engaging their communities to decrease infection rates and increase access to care.

The division has created new prevention and treatment partnerships with Aletheia House, a community based organization that provides substance abuse treatment to low-income individuals in the communities in which they live. It is one of Alabama's largest providers of substance abuse treatment, substance abuse/HIV prevention, employment, and affordable housing. The second new partner is Capstone Rural Health Center, which serves Walker County and surrounding area populations by providing comprehensive primary care services that treat illness and manage chronic diseases.

Currently, the division is providing medications for 2,808 individuals through the Ryan White HIV/AIDS Program (RWHAP) Part B AIDS Drug Assistance Program (ADAP). The majority of clients are receiving ADAP-funded insurance assistance, which is cost-effective when compared with ADAP prescription-only drug coverage (ADAP-Rx). Alabama offers two ADAP-funded insurance coverage options: the Alabama Insurance Assistance Program (AIAP) and the Medicare

Part D Client Assistance Program (MEDCAP). AIAP is provided to 2,234 clients, 485 clients receive ADAP-Rx, and 89 clients receive MEDCAP. Staff managing Alabama's RWHAP Part B ADAP have recently expanded to meet the needs of increasing numbers of clients receiving ADAP-funded insurance assistance.

The Start Talking Alabama campaign targeting young men of color has created a presence on social media utilizing Facebook, Instagram, Twitter, and YouTube. The campaign has posted six videos on YouTube and created two satellite productions accessible to providers across the United States to address the issues. Start Talking Alabama has been recognized by the Centers for Disease Control and Prevention for outstanding work.

The division partnered with HIV prevention and treatment providers statewide to launch two new HIV prevention/treatment campaign initiatives. The first campaign is "90-90-90 by 2020," where 90 percent of all people living with HIV will know their status, 90 percent of all people diagnosed with HIV infection will receive sustained antiretroviral therapy, and 90 percent will achieve viral suppression. The second campaign, "Undetectable = Untransmittable" (U=U), supports clients in achieving undetectable HIV viral loads to improve their own health and decrease HIV transmission to others. People living with HIV who achieve and maintain viral suppression are 96 percent less likely to pass HIV on to their sexual partners. For people living with HIV who reach undetectable levels, there are no documented cases of sexual transmission. This is the premise of the "Undetectable = Untransmittable" (U=U) campaign, which the Centers for Disease Control and Prevention supports, agreeing there is "effectively no risk" of sexually transmitting HIV when on treatment and undetectable.

Immunization (IMM)

The IMM goal is to reduce vaccine-preventable diseases and increase immunization rates. IMM has five branches: Surveillance; Registry (ImmPRINT); Vaccines for Children (VFC) and Assessment, Feedback, Incentive, and Exchange (AFIX); Field Operations and Marketing; and Administration.

The Surveillance Branch conducts an annual School Survey in conjunction with the Alabama Department of Education. This survey evaluates the immunization status of all children to ensure they have a current Certificate of Immunization (COI) or a valid exemption on file. In the 2016-2017 School Entry Survey, medical and religious exemptions combined continue to be less than 1 percent for all students in public and private schools. The number of students with expired and no COI remained at 5 percent. In addition, the Surveillance Branch oversees vaccine-preventable disease investigations statewide. IMM field staff investigates vaccine-preventable disease reports submitted by notifiable disease reporters and laboratories. As of December 2017, IMM field staff investigated 1,947 disease reports in 2017; of those investigations, there were 9 pertussis and 1 outbreak each of hepatitis B, mumps, and varicella.

Figure 8. Number of ImmPRINT Sites by Type, 2015-2017

Year	Source	Clinic	Federally Qualified Health Center/Rural Health Clinic	Hospital	Pharmacy	School	Subtotal	Grand Total
2015	ImmPRINT	575	123	12	47	5	762	1,837
	HL7	576	76	82	341	-	1,075	
2016	ImmPRINT	644	136	24	80	434	1,318	2,360
	HL7	536	76	77	352	1	1,042	
2017	ImmPRINT	742	146	21	194	587	1,690	2,607
	HL7	447	73	49	348	-	917	

Figure 9. Cases Classified as Vaccine-Preventable Disease Cases in Alabama

Disease	2010	2011	2012	2013	2014	2015	2016	2017
Measles	0	0	0	0	0	0	0	1
Mumps	4	2	0	0	0	1	2	35
Rubella	0	0	*1	0	0	0	0	1
Tetanus	0	1	0	0	0	1	1	1
Pertussis	94	68	117	98	204	170	165	226
Polio	0	0	0	0	0	0	0	0
Diphtheria	0	0	0	0	0	0	0	0
Varicella	114	96	46	42	36	174	100	93
Meningococcal**							5	4
<i>Strep. pneumoniae</i> **							341	375
Hepatitis A**								21
Hepatitis B**								78
<i>Haemophilus influenzae</i> **							79	86

*Congenital Rubella Syndrome

**ID&O investigated these diseases previously.

Figure 10. Number of New Vaccines Submitted by All Site Types

Year	Source	# of Vaccinations
2015	ImmPRINT	1,259,568
	HL7	1,677,397
2016	ImmPRINT	1,564,596
	HL7	2,031,777
2017	ImmPRINT	1,798,314
	HL7	2,374,098

The Registry Branch manages the interfaces and providers who submit vaccine information in the state's immunization registry,

Immunization Patient Registry with Integrated Technology (ImmPRINT), which includes all ages. As of January 31, 2017, there were more than 4.9 million patients and almost 55 million doses in the registry. Sites can submit vaccine information manually (ImmPRINT) or by interface (HL7).

The VFC Branch manages the Alabama VFC Program, a federal entitlement program, which provides vaccine at no cost to children under 19 years of age who are uninsured, Medicaid-eligible, under-insured, American Indian, or Alaskan Native. As of December 2017, 511 enrolled public and private providers received approximately \$65 million worth of vaccines. As part of the vaccines distributed, the VFC Program provided 173,000 doses of seasonal influenza to providers in all 67 counties. Immunization field staff performs regulatory VFC site visits and AFIX audits on 50 percent of enrolled providers annually to promote proper vaccine storage and handling, accurate and safe administration of vaccine, and vaccine coverage improvement.

Activities of the newly formed Field Operations and Marketing Branch include:

- Conducting more extensive educational outreach programs, including implementing new marketing campaigns on various types of vaccine-preventable diseases.
- Creating a social media presence for information release and citizen feedback.
- Developing print materials for statewide dissemination.
- Partnering with state agencies, medical associations, and other organizations to identify effective and creative initiatives to increase vaccination rates.

In addition, the branch created processes to organize field operation communication, manage immunization training and orientation, and improve data quality and efficiency for compliance visits.

The Administration Branch manages state and federal budgets with over 50 staff statewide, including contracts, grants, payroll, leave, and personnel.

Infectious Diseases & Outbreaks (ID&O)

The ID&O mission is to protect the health of Alabama residents by monitoring and investigating select infectious, zoonotic, and environmental diseases and events.

Figure 11. Select Alabama Notifiable Disease Investigation and Case Counts, 2017*

Diseases (counts are preliminary as of January 3, 2018)	Investigations	Cases
Anthrax	1	0
Arboviral (includes West Nile and Zika virus)	374	63
Babesiosis	5	1
Botulism	3	0
Brucellosis	27	0
Campylobacteriosis	798	768
Cholera	0	0
Cryptosporidiosis	196	184
Dengue	4	0
<i>E. coli</i> , shiga toxin-producing	120	29
Ehrlichiosis/Anaplasmosis	35	17
Giardiasis	240	187
Hemolytic uremic syndrome (HUS)	1	0
Hepatitis E, acute [†]	1	0
Influenza-associated pediatric mortality	1	1
Legionellosis	95	66
Listeriosis	6	5
Lyme disease	267	38
Malaria	9	8
Novel influenza A virus infections	1	0
Plague	1	0
Psittacosis	2	0
Q fever	7	0
Rabies, animal	49	49
Rabies, human	0	0
Salmonellosis	1,144	990
Shigellosis	249	211
Spotted fever rickettsiosis	1,722	663
Tularemia	6	1
Typhoid fever	2	1
VISA (<i>Staphylococcus aureus</i> , vancomycin-intermediate)	4	4
VRSA (<i>Staphylococcus aureus</i> , vancomycin-resistant)	1	0
Vibriosis (non-cholera)	27	26
Yellow fever	1	0
Other investigations [‡]	6	0
Total	5,405	3,312

*These case counts do not include conditions investigated by other divisions (i.e., TB, IMM, STD, and HIV/AIDS).

[†]In September 2017, hepatitis A and hepatitis B were transferred to the Immunization Division, while hepatitis C was transferred to the STD Division. Hepatitis E, acute, is the only remaining type of hepatitis investigated by ID&O.

[‡]The Other Investigations category includes a variety of conditions or events that have been investigated, but are not reportable in Alabama or do not fall into any other category (e.g., Acute flaccid myelitis, histoplasmosis, Toxic-shock syndrome, yersiniosis, etc.).

Figure 11 demonstrates the volume of disease reports investigated in 2017 as compared to the number that were counted as cases according to the criteria established by the Council of State and Territorial Epidemiologists and the Centers for Disease Control and Prevention (CDC).

Outbreak Investigations

ID&O defines an outbreak as two or more similarly ill persons, who live in different households, and share a common exposure; a cluster is defined similarly except a common exposure is not identified. All reporters, as outlined in the Notifiable Disease Rules, are required to report outbreaks of any kind within 24 hours of presumption. In 2017, 581 clusters of illness were investigated; of which, 42 percent were determined to be outbreaks. Interdisciplinary collaborative efforts aided in the identification of causative agents, likely modes of transmission, and underlying environmental causes of illness. A few of the outbreak investigations are described as follows:

A Probable Norovirus Outbreak Associated with a Sushi Restaurant

On November 7, 2017, a Lee County environmentalist received several complaints from patrons of a sushi restaurant who were ill with vomiting, diarrhea, weakness, and chills beginning November 4. ID&O identified two additional ill persons. An environmental assessment was completed where multiple infractions were noted, such as improper food handling, a non-functioning hand sink, and improper food-holding temperatures; immediate corrective actions took place. Norovirus GI1 was detected in a clinical specimen submitted to the Bureau of Clinical Laboratories (BCL). Preventative strategies were given to ill persons to avoid secondary spread of the virus.

Clostridium perfringens Outbreak Associated with a Large Catered Event

On October 16, 2017, 90 individuals who attended a company picnic in Colbert County the day before reportedly became ill. There were an estimated 1,500 attendees. ID&O conducted a cohort study to

help identify the potential source(s) for the outbreak. The Bureau of Environmental Services (BES) performed an environmental assessment of the food caterer for the event and collected leftover food samples for laboratory testing. Additionally, BES visited the vendors that provided items such as snacks, freezers, tables, bouncy houses, and port-a-johns; environmental swabs were collected for laboratory testing. ID&O was able to determine which pathogens to test for based on the information collected during the interviews. The CDC assisted by testing the clinical specimens and environmental swabs. *Clostridium perfringens* enterotoxin was detected in three of the four clinical specimens submitted, while Enterotoxigenic *Escherichia coli* was detected in the remaining clinical specimen. No pathogens were detected on the environmental swabs. Due to the time lag in the clinical specimen laboratory testing at CDC, the food samples were not tested. Based on the results of the investigation, improper holding temperatures most likely allowed for the proliferation of the toxin in the pulled chicken that subsequently caused illness among the attendees.

A Multistate Outbreak of *Brucella abortus* RB51 Associated with a Texas Dairy Farm

In late July 2017, the Texas Department of State Health Services, in conjunction with the CDC, launched a multi-state outbreak investigation after laboratory testing confirmed *Brucella abortus* RB51 in clinical specimens and food samples associated with a dairy farm in Texas. Texas notified ID&O that 15 Alabama residents had been exposed to raw milk from the affected dairy. Each individual was contacted to verify his or her exposure, collect any symptom information, and advise on testing and/or post-exposure prophylaxis (PEP). Given the long incubation period for *Brucella*, extended monitoring of each person ensued (for 6 months after the most recent exposure); contact was attempted every 2 weeks to check for any new symptoms consistent with brucellosis. Although 7 people were tested and had negative results for *Brucella*, 12 of the 15 started PEP as the outbreak strain cannot be detected using routine testing methods. An environmental sample of leftover butter was collected and sent to the BCL for testing, where *Brucella* was presumptively detected by PCR. Meanwhile, a portion of the sample was forwarded to CDC for parallel testing, where *Brucella abortus* was isolated and RB51 was detected by PCR. Monitoring of Alabama's exposed residents ended in mid-December without identification of any confirmed cases.

An Outbreak of Norovirus GII.2 Associated with a College Baseball Tournament

Between May 2 and 7, 2017, 31 participants and 1 fan who attended a college baseball tournament in Montgomery became ill with gastrointestinal symptoms. Five individuals who submitted stool specimens to the BCL tested positive for norovirus GII.2. Common exposures among the ill were a banquet and the tournament itself, but no food or drink items from these events were implicated as the primary source of illness based on survey responses. Although an environmental assessment revealed several storage, cleaning, and other violations, it was concluded that the virus was likely introduced via an ill player and spread throughout the tournament via person-to-person contact.

Arboviral (Mosquito-borne) Surveillance

In 2017, the department investigated 379 reports of suspected human arboviral illness; of which, 17 percent were determined to be cases.

Figure 12. Counts of Human Arboviral Cases – Alabama, 2017*

Arboviral Disease	Investigations	Cases
California encephalitis	0	0
Chikungunya	2	0
Dengue	4	0
Eastern equine encephalitis	0	0
Jamestown Canyon	0	0
La Crosse encephalitis	0	0
Powassan	0	0
St. Louis encephalitis	3	1
West Nile virus	88	59
Yellow fever	1	0
Zika virus	281	3
Total	379	63

*As of January 3, 2018

The majority of investigations were for Zika virus (74 percent) or West Nile virus (23 percent). (Figure 12).

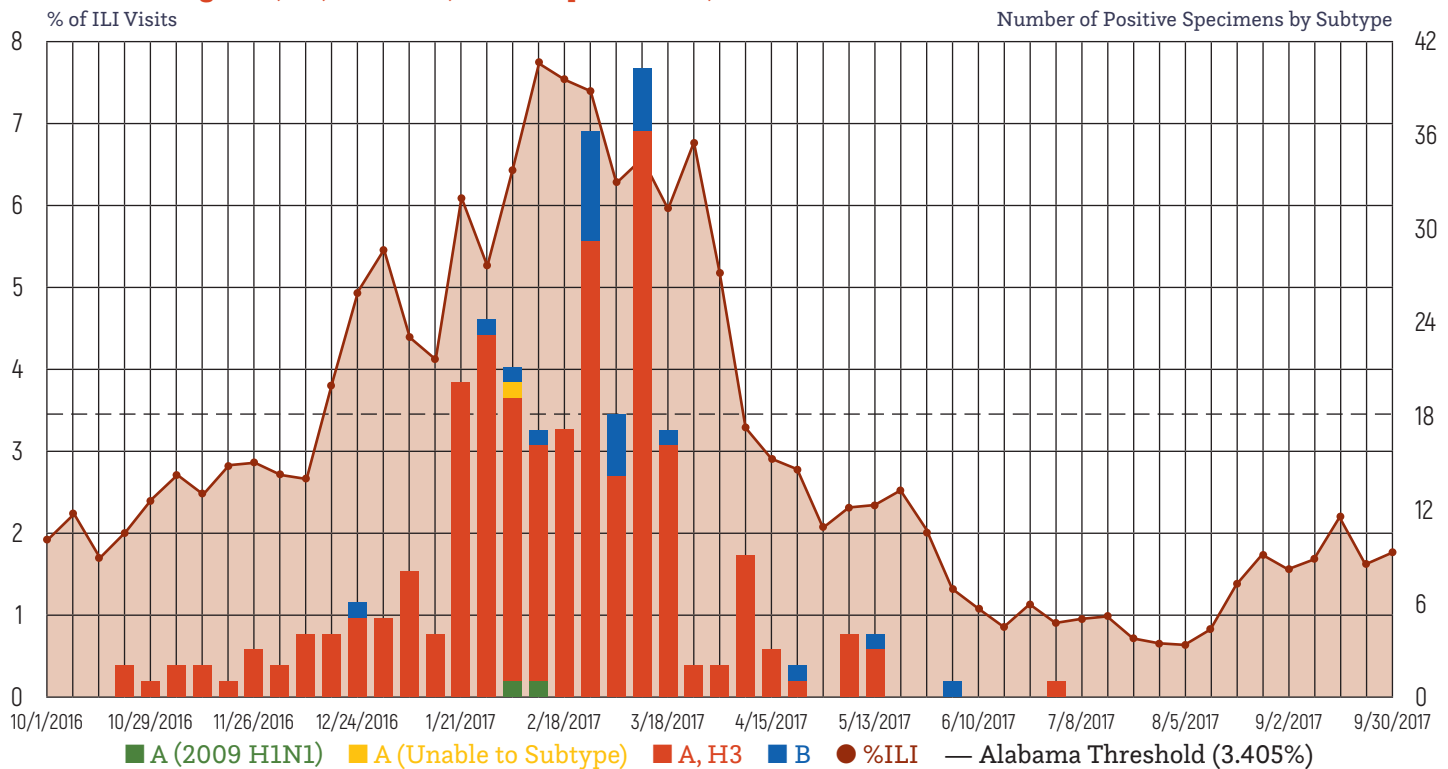
Cases of illness associated with Zika virus have been identified in Alabama. As Zika cases continue to be prevalent in other countries, ID&O will continue to conduct surveillance and testing to identify potential travel-associated cases, particularly among pregnant women due to the elevated risk of birth defects associated with the virus. These individuals are not only tested for Zika virus, but also for dengue and chikungunya since they share similar viral characteristics. Because of this process, ID&O has developed a multi-functional surveillance system that is able to identify travel-associated cases and detect any locally acquired cases in a timely manner so that control measures are initiated swiftly. No locally acquired cases of Zika virus were identified in 2017 in Alabama.

Influenza Activity

During the 2016-17 influenza season (October 2, 2016-September 30, 2017), 532 specimens were submitted to the BCL for respiratory pathogen testing, of which 46 percent tested positive for influenza.

As a participant in the U.S. Outpatient Influenza-like Illness (ILI) Surveillance Network (ILINet), Alabama has had, on average, 21 medical providers submitting the percentage of patient visits at their facilities attributable to ILI each week. These data are used to measure ILI activity and to assess geographic spread of influenza across the state.

Figure 13 illustrates positive influenza specimens (by type) received at the BCL and percentage of provider visits with ILI during the 2016-17 influenza season. These data are essential for monitoring which influenza viruses are circulating, helping determine which influenza strains should be included in the seasonal vaccine, and detecting rare events such as novel influenza or antiviral resistance.

Figure 13. Positive Influenza Specimens Received at the BCL and Percentage of Visits with ILI Reported by Week Ending Date, AL, October 1, 2016 - September 30, 2017**Figure 14. HAIs Reported in Alabama Hospitals, 2017**

Number of Alabama Hospitals Reporting	Number of Device Days/Procedures	Number of HAIs	Standardized Infection Ratio (SIR)	2016 AL Hospitals versus National Performance
CAUTIs				
92	452,404 [*]	403	0.442 ^{**}	Better
CLABSIs				
69	217,972 ^{***}	288	0.608	Better
SSIs Associated with Colon Surgeries[†]				
66	6,102	133	0.719	Better
SSIs Associated with Abdominal Hysterectomies[†]				
59	7,139	33	0.590	Better

^{*}Catheter days: The sum of patients per day with an indwelling urinary catheter in medical wards, surgical wards, medical/surgical wards, and adult and pediatric critical care units; facilities without these wards and units reported mixed acuity wards. ^{**}Does not include mixed acuity facilities. ^{***}Central line days: The sum of patients per day with a central line in adult, pediatric, and neonatal critical care units. [†]Does not include superficial SSIs.

Healthcare-Associated Infections

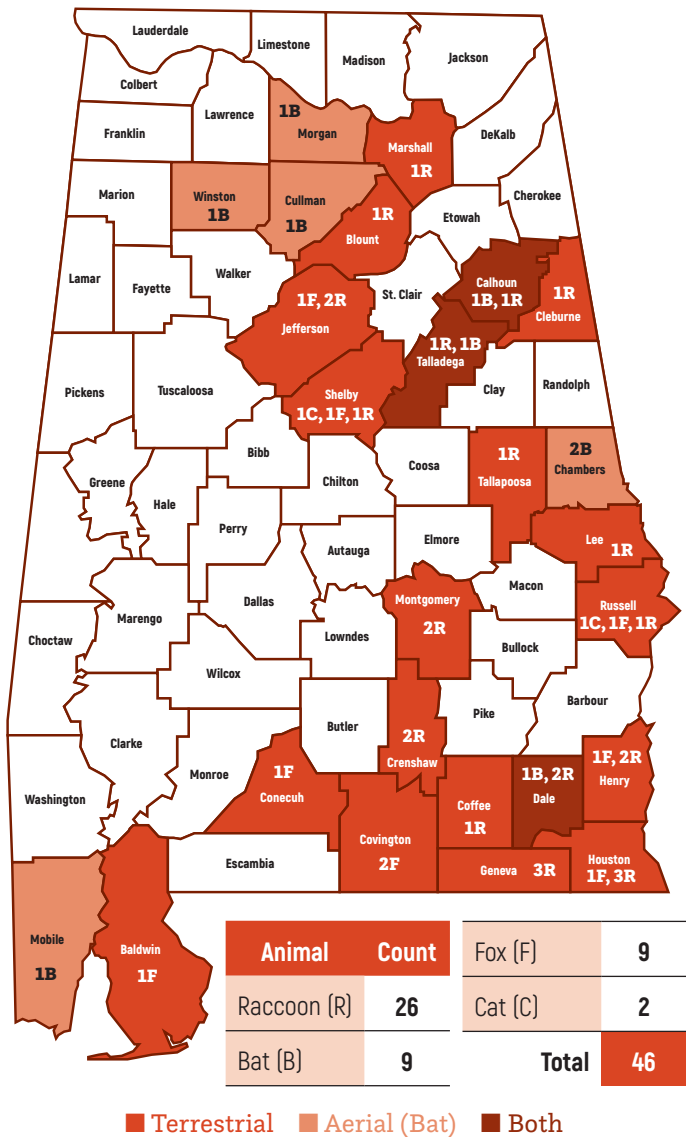
Alabama remains committed to reducing healthcare-associated infections (HAIs) in hospitals. Alabama hospitals began reporting four infection measures to the Alabama Department of Public Health (ADPH) in 2011: catheter-associated urinary tract infections (CAUTIs), central line-associated bloodstream infections (CLABSIs), surgical site infections (SSIs) associated with colon surgeries, and SSIs associated with abdominal hysterectomies. This data represents Alabama's sixth year of reporting infection measures (Figure 14). In 2016, the most recent year for which statistics are available, Alabama hospitals

had significantly fewer CAUTIs and CLABSIs than predicted using national baseline data. SSI counts for colon surgeries and abdominal hysterectomies were also statistically better than numbers predicted using national baseline data.

Rabies

In 2017, the department investigated 6,673 potential rabies exposures on animals suspected of having exposed a human. The BCL confirmed 46 positives with the vast majority being in wild animals – raccoons, foxes, and bats (Figure 15). Two cats tested positive, compared with

Figure 15. Laboratory-Confirmed Animal Rabies Cases, 2017*



*Only includes animals tested by the Alabama Department of Public Health

one dog that tested positive in 2016. The cats were confirmed to have been infected with the raccoon strain, which highlights the continued importance and emphasis on vaccination of domestic animals to reduce the public health threat of rabies. The total number of laboratory confirmed animal rabies cases decreased from the 77 reported in 2016.

Sexually Transmitted Diseases

Primary and Secondary Syphilis

In 2017, a total of 342 cases of primary and secondary syphilis infection were reported to the Alabama Department of Public Health. This case count corresponds to a rate of 7.0 cases per 100,000 population. This is the third consecutive year primary and secondary syphilis has increased in Alabama. Men who have sex with men or who are bisexual accounted for 45.9 percent of the cases in 2017.

Chlamydia

In 2017, a total of 28,947 cases of *Chlamydia trachomatis* infection were reported to the department. This case count corresponds to a rate of 595.2 cases per 100,000 population. There was nearly a 9 percent increase in the number of chlamydia cases reported from the previous year.

In 2017, the overall rate of chlamydial infection in Alabama was highest among women (at 811.8 cases per 100,000 females) compared to men (360.6 cases per 100,000 males). Women are specifically targeted for chlamydial screening in order to prevent infertility, pelvic inflammatory disease, and/or reproductive sequelae.

The rate of reported chlamydia cases remained highest among blacks (859.9 cases per 100,000 population), Hispanics (279.5 cases per 100,000 population), and whites (112.8 cases per 100,000 population). Nearly 40 percent of the chlamydia cases reported in 2017 were residents of Jefferson (5,867 cases), Mobile (2,977 cases), and Montgomery (2,695 cases) counties.

The rate of chlamydia infections was highest among persons age 20-24 (3,417.3 cases per 100,000 population) and persons age 15-19 (2,579.3 cases per 100,000 population). This demonstrates the need to engage adolescents and young adults in discussions on sexual health topics.

Figure 16. Primary and Secondary Syphilis Cases, Alabama 2008-2017

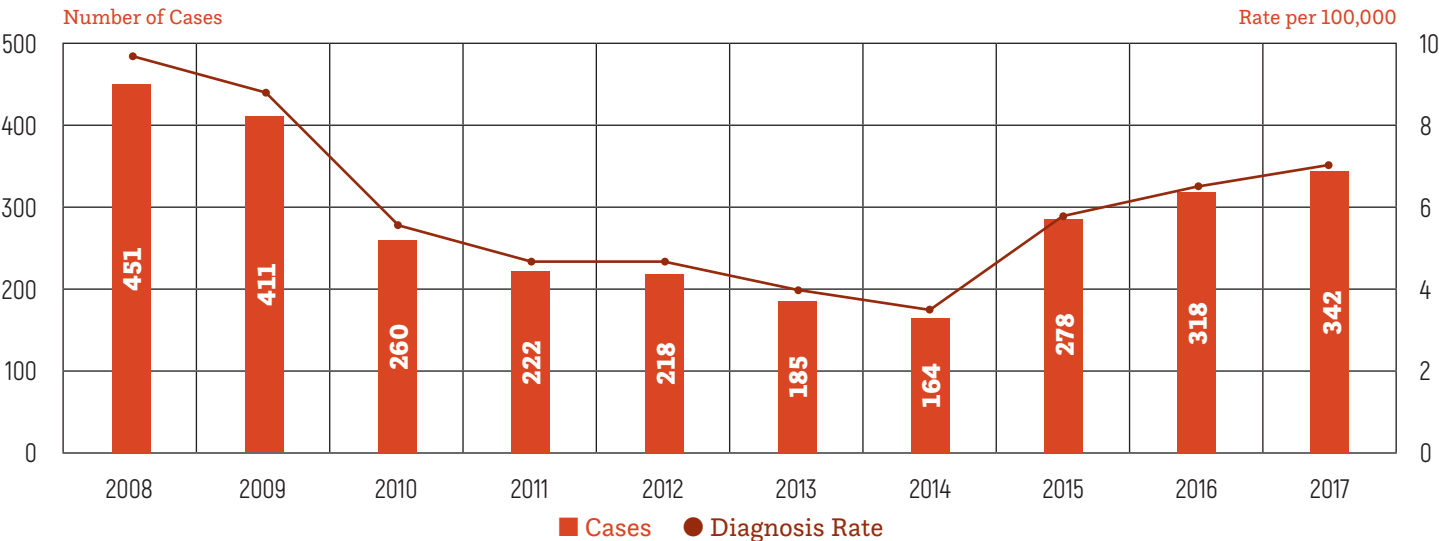


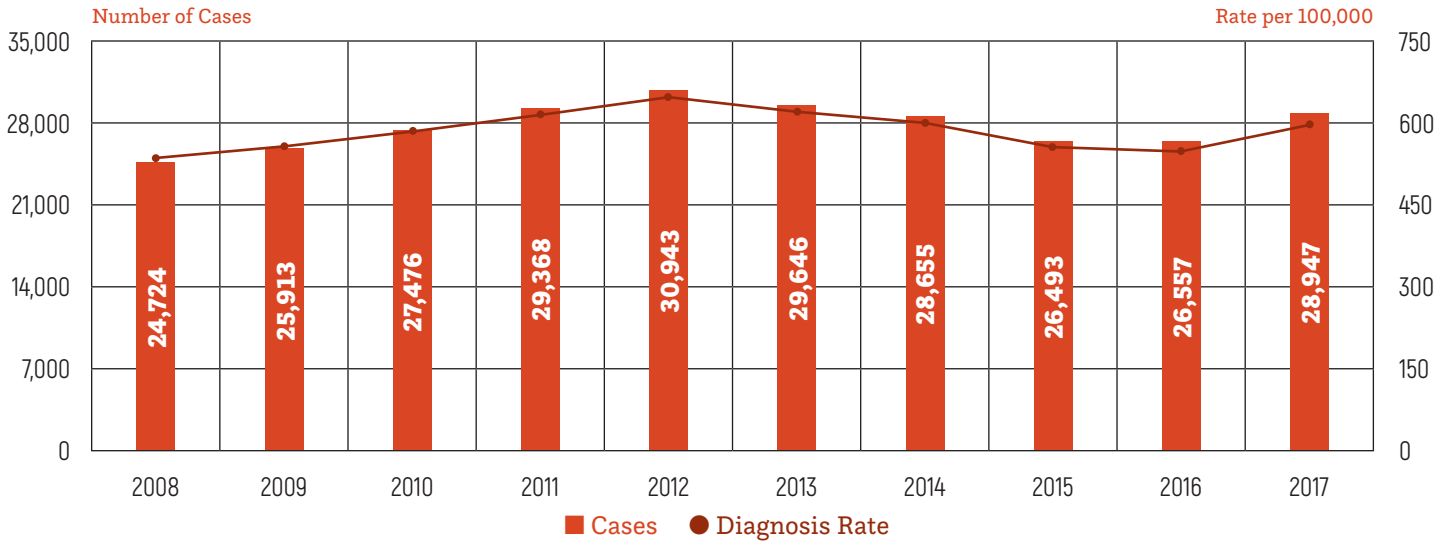
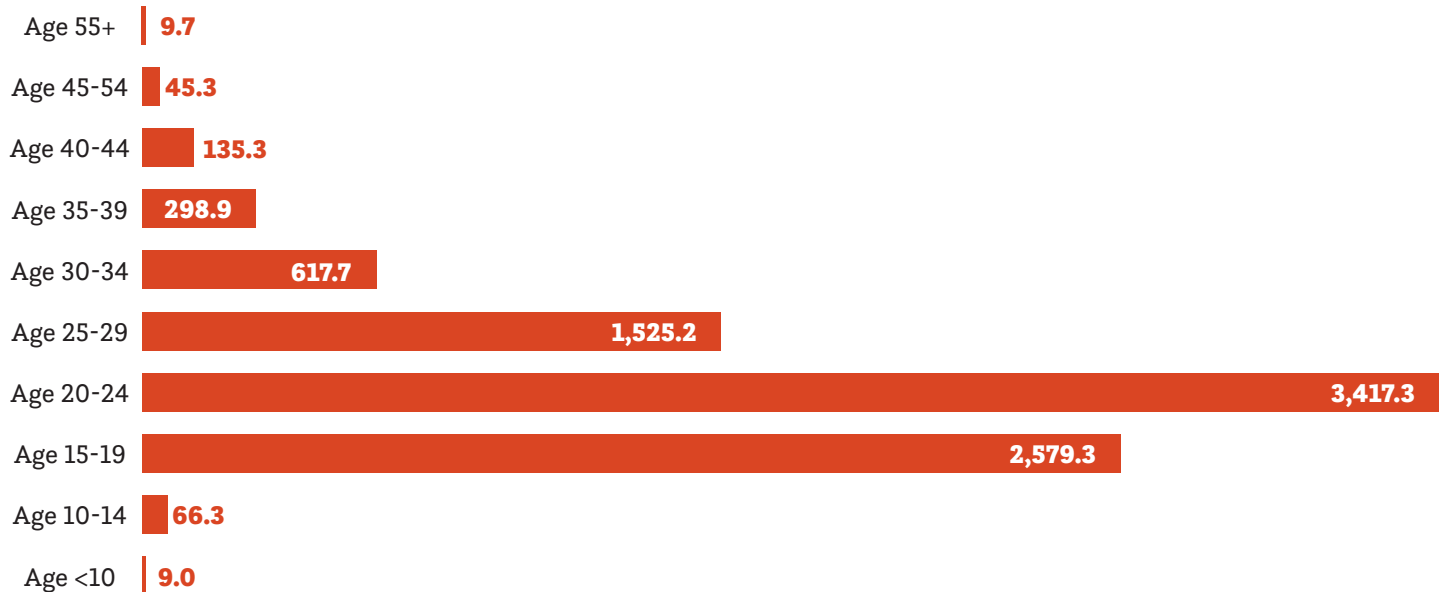
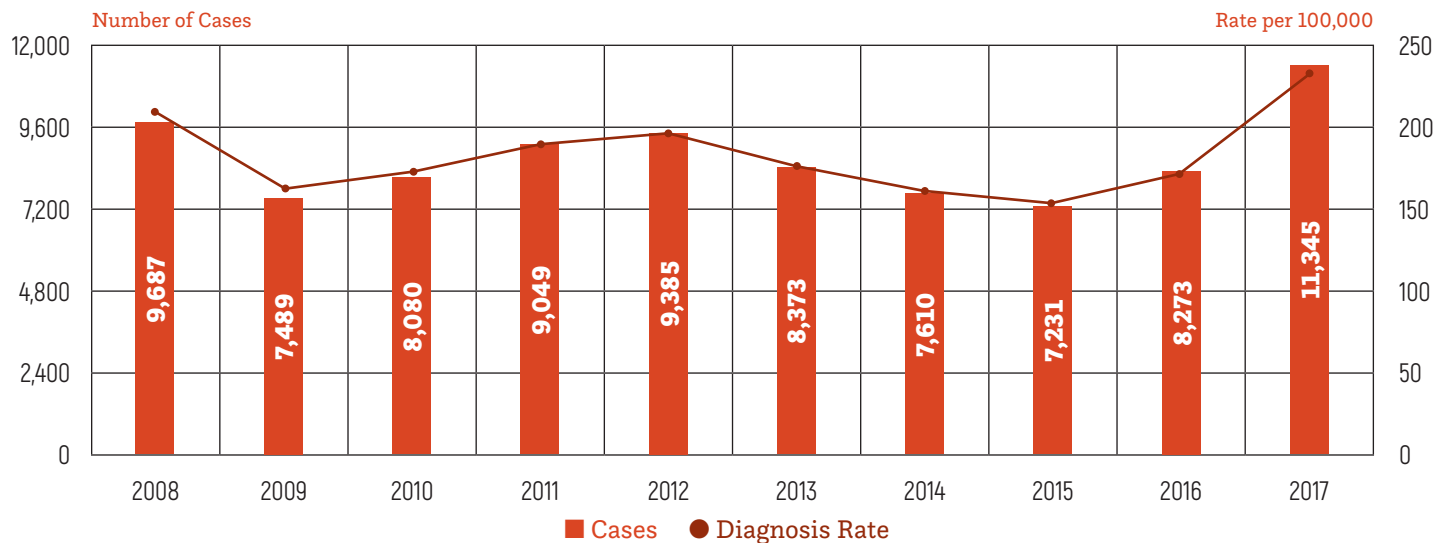
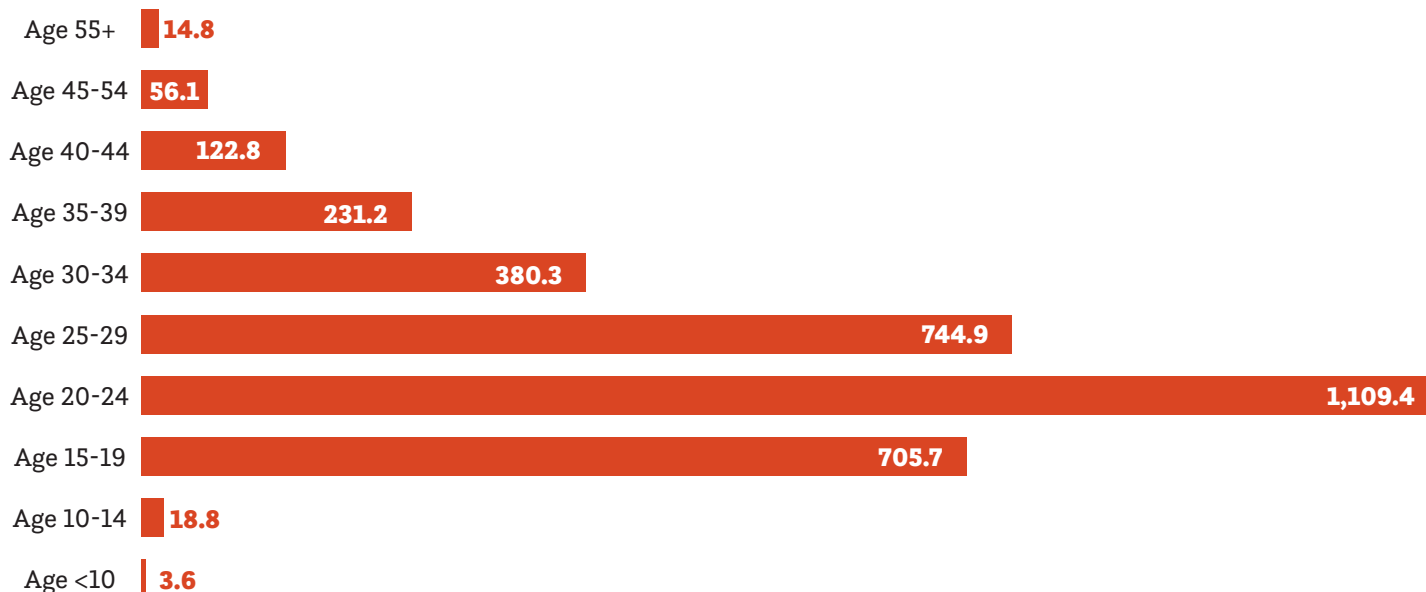
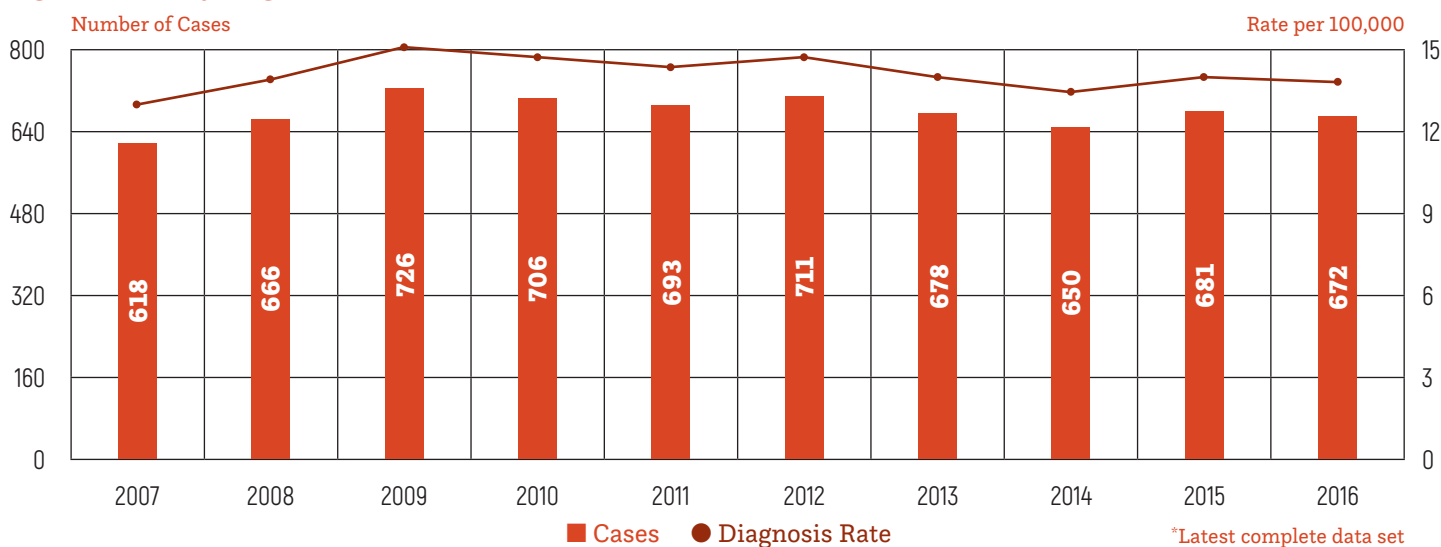
Figure 17. Chlamydia Cases, Alabama 2008-2017**Figure 18. Chlamydia - Rates of Reported Cases by Age Group, Alabama 2017****Figure 19. Gonorrhea Cases, Alabama 2008-2017**

Figure 20. Gonorrhea - Rates of Reported Cases by Age Group, Alabama 2017

Rate per 100,000

**Figure 21. Newly Diagnosed HIV and AIDS Cases, Alabama 2007-2016*****Gonorrhea**

In 2017, a total of 11,345 cases of *Neisseria gonorrhoeae* infection were reported to the department. This case count corresponds to a rate of 233.3 cases per 100,000 population, a rate increase of 37.2 percent from the previous year.

In 2017, the rate of reported gonorrhea cases remained highest among blacks (384.0 cases per 100,000 population) followed by Hispanics (524 cases per 100,000 population) and whites (39.4 cases per 100,000 population).

The number of reported gonorrhea cases reported among males and females increased by 40.0 percent and 34.8 percent respectively in 2017. The overall rate of gonorrhea infection in Alabama among men (249.3 cases per 100,000 population) was higher than women (216.8 cases per 100,000 population).

Nearly 51 percent of the gonorrhea cases reported in 2017 were residents of Jefferson (2,651 cases), Madison (780 cases), Montgomery (968 cases), and Mobile (1,362 cases) counties.

The rate of gonorrhea infections was highest among persons age 20-24 (1,109.4 cases per 100,000 population), persons age 25-29 (744.9 cases per 100,000 population), and persons age 15-19 (705.7 cases per 100,000 population).

HIV/AIDS

The latest complete data set for HIV analysis is for the calendar year 2016. In 2016, a total of 672 HIV/AIDS cases were reported to the Alabama Department of Public Health. This case count corresponds to a rate of 13.8 cases per 100,000 population.

The rate of HIV/AIDS cases was highest among blacks (34.8 cases per 100,000 population). The rate of HIV/AIDS cases was lower

among Hispanics (9.3 cases per 100,000 population) and whites (5.7 cases per 100,000 population).

Although the number of reported HIV/AIDS cases among females and males increased by 1.2 percent each, in 2016, the overall rate of HIV/AIDS cases in Alabama among women and men was 5.9 cases per 100,000 population and 22.2 cases per 100,000 population, respectively.

Forty-eight percent of the HIV/AIDS cases reported in 2016 were residents of Jefferson (140 cases), Montgomery (93 cases), and Mobile (92 cases) counties.

Tuberculosis (TB) Control

The ultimate goal of the Division of TB Control is to eliminate tuberculosis in Alabama. Until that goal is reached, the division strives to reduce the annual burden of disease, limit transmission, and prevent future cases through the provision of diagnostic, treatment, case management, and contact investigation activities. The division provides these services to all persons in Alabama-regardless of the ability to pay. This commitment to the citizens of Alabama has contributed to the historic decline in morbidity illustrated in the accompanying chart.

In 2017, the Division of TB Control evaluated 202 persons suspected of having TB, eventually ruling out disease in 82 suspects and confirming active TB disease in 120 patients. This figure represents a 7.14 percent increase in confirmed cases from the 112 cases reported in the previous year.

The 10-year trend in confirmed active cases of TB as illustrated in Figure 23 reveals an overall decline of 31.8 percent in verified TB cases (from 2008 to 2017). However, morbidity reported over the past 5 years has demonstrated far less progress in the continuing steady decline of reported TB cases since 2013, when Alabama reported a historical low of 108 cases. During the past 5 years, Alabama has reported an average of 119 cases per year.

In addition to the identification, evaluation, and treatment of persons with active TB, the division seeks to prevent future cases through prompt identification and medical evaluation of contacts at risk for exposure, and to assure the initiation and completion of preventive therapy for those contacts diagnosed with latent TB infection (LTBI). Preliminary data for 2017 shows that 3,679 persons were identified as contacts to tuberculosis cases classified as Acid Fast Bacilli (AFB) sputum smear positive cases, and that 3,028 (82

Figure 22. Historical Trend of Tuberculosis Cases in Alabama, 1977-2017

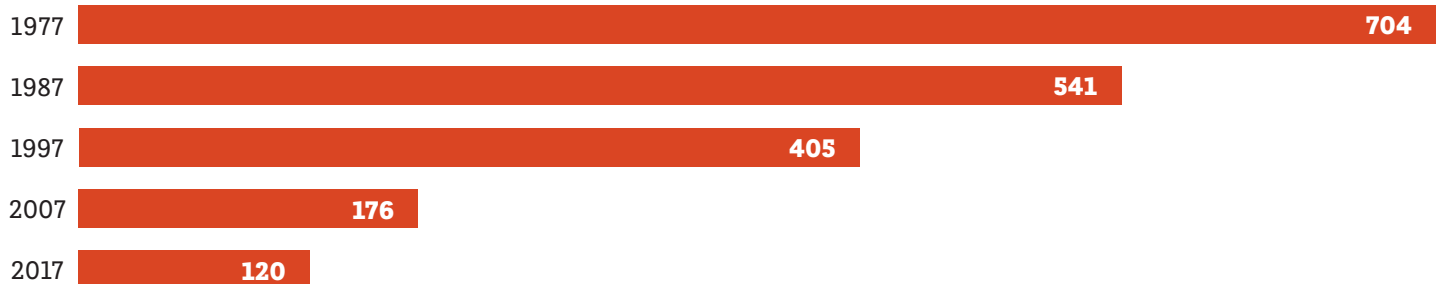
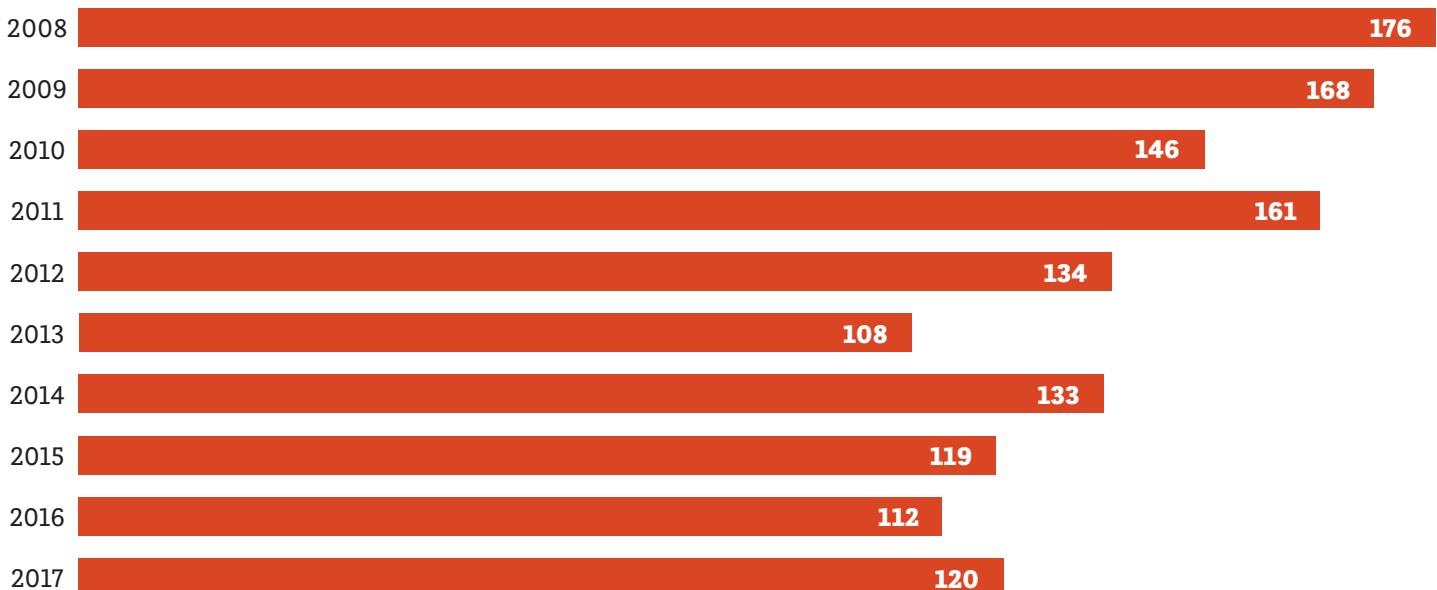


Figure 23. Tuberculosis Cases in Alabama, 2008-2017



percent) of those contacts were fully evaluated. Of the number of persons who were fully evaluated, initial reports indicate that 159 of 171 (93 percent) persons were diagnosed with LTBI and were placed on preventive treatment for LTBI by division staff. As of the date of this report, 109 persons (69 percent) have been reported as completing preventive therapy.

The significance of preventively treating 109 persons for LTBI becomes evident when viewed from the perspective of future medical costs averted. In 2016, researchers at the CDC estimated the cost for treating a single case of drug-susceptible TB in the United States to be \$18,000¹. From there, the costs to treat more complicated TB increase exponentially. The cost for treating a single case of multidrug-resistant TB was estimated to be \$154,000. The cost for treating a single case of extensively drug-resistant TB was reported to be \$494,000.

The division continues to place great emphasis on the identification of persons at high risk for progression to active TB disease. Some groups of persons who are diagnosed with LTBI are at increased risk for rapid progression to TB disease. These groups include persons who are close contacts to AFB smear positive cases, individuals diagnosed with certain immunocompromising medical conditions such as HIV and diabetes, persons who are foreign-born from countries with a high prevalence of TB and persons who abuse drugs and alcohol. Treating these persons preventively protects the individual and the community at large from developing TB disease.

Highlights: The ongoing problem with TB cases in Perry County continues and has seen a slight spread into neighboring counties and throughout the state. There were 11 new laboratory confirmed cases matching the same genotype as the Perry County cluster and 3 clinical cases with epidemiological links to the Perry County cluster, totaling 14 cases associated with this ongoing outbreak during 2017. Genotypically matching cases included two from Tuscaloosa County, one from Dallas County, and one from Talladega County. Supplemental funding received from CDC in 2017 supported a major community awareness campaign that was started in the fall of 2017 that includes billboards, gas top signs, ice machine wraps, and bathroom door stall posters. A TB hotline to permit the anonymous and confidential

Figure 24. Demographics for Confirmed TB Cases in Alabama, 2017

Age
0-4 = 10 (8.3%)
5-14 = 2 (1.6%)
15-24 = 11 (9.2%)
25-44 = 33 (27.5%)
45-64 = 41 (34.2%)
65+ = 23 (19.2%)
Race/Ethnicity
White = 54 (45.0%)
Black = 58 (48.4%)
Asian = 7 (5.8%)
Other = 2 (0.8%)
Hispanic* = 15 (13.2%)
Gender
Male = 72 (60.0%)
Female = 48 (40.0%)
Nativity
U.S. Born = 95 (79.2%)
Foreign Born = 25 (20.8%)

*Hispanic ethnicity is not a single race, so percentages noted do not equal 100.

reporting of persons suspected of having TB symptoms was also established. The hotline was set up for immediate processing of the information being reported.

1. Shepardson D, Marks SM, Chesson H, Kerrigan A, Holland DP, Scott N, Tian X, Borisov AS, Shang N, Heilig CM, Sterling TR, Villarino ME, Mac Kenzie WR. Cost-effectiveness of a 12-dose regimen for treating latent tuberculous infection in the United States. *Int J Tuberc Lung Dis*. 2013 Dec; 17(12):1531-7.

OFFICE OF EMERGENCY MEDICAL SERVICES

The Office of Emergency Medical Services (OEMS) is responsible for protecting the health, safety, and welfare of the public by assuring that Emergency Medical Services (EMS) provided by response agencies, training entities, and technicians meet or exceed established standards. The OEMS investigates complaints and may exercise its authority to deny, place on probation, suspend, or revoke licensure when statutory or regulatory violation is substantiated.

Alabama Trauma and Health Systems

The Alabama Trauma System remains operational in all six EMS regions, and continues to positively impact the citizens of Alabama by facilitating timely routing to the appropriate hospitals. Prior to the inception of the trauma system in 2008, the average hospital length of stay was 5.72 days compared to the current length of stay of 5.00 days. Alabama is the only state with the capability to constantly monitor the status of every trauma hospital and route the trauma patient to the right hospital every time.

The Statewide Stroke System was activated on October 30, 2017. The primary goal of the system is to maintain a stroke emergency care system that results in 100 percent tissue plasminogen activator (tPA) administration to all eligible patients as well as decreased stroke mortality and disability. The activation was a culmination of efforts that started in 2013. Identical to the trauma system, all EMS regions are participating in the stroke system. Currently, 63 hospitals across Alabama and 6 hospitals in bordering states have applied to participate and complete inspection requirements to be designated as a stroke hospital in the statewide system. The three designation levels of stroke centers include: Stroke Ready Center, Primary Stroke Center, and Comprehensive Stroke Center. Patients who are experiencing symptoms of a stroke need to be rapidly evaluated at a hospital and treated within a few hours of the onset of symptoms to either reverse the stroke or minimize the damage. Because tPA has to be administered within the first few hours of acute ischemic stroke onset, the system will improve the chances of survival regardless of proximity to an urban stroke center. From January 1 through December 31, 2017,

5,546 patients were treated for stroke, 1,408 of which were ischemic stroke; 357 received tPA, a rate of 25 percent.

Alabama Trauma Registry (ATR)

The ATR is an integrated database that collects patient data from the state's certified trauma centers, out-of-state hospitals that participate in the Alabama Statewide Acute Health System-Trauma, as well as head and spinal cord data from all hospitals within the state. The Alabama Department of Rehabilitation Services uses ATR data to offer assistance to patients with moderate to severe head and spinal cord injuries. ATR data is used for system quality improvement and research in collaboration with other entities.

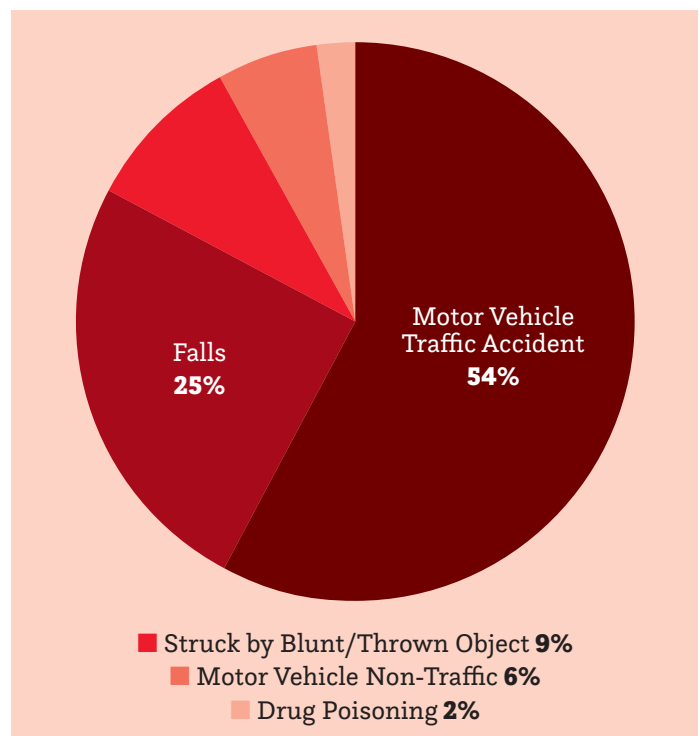
Alabama Emergency Medical Services for Children (EMSC)

The mission of the EMSC Program is to prevent and reduce child, youth, and adolescent disabilities and deaths that are the result of severe illness and injury. Several services are available through the program including education for prehospital professionals; continual permanent installation of the EMSC Program into Alabama's EMS system; and assurance that pediatric equipment, according to the American Academy of Pediatrics/American College of Emergency Physicians guidelines, is available on prehospital emergency vehicles that transport children.

Figure 25. EMS Personnel – Personnel Licensed by OEMS by License Type

License Type	Number of Personnel
Advanced Emergency Medical Technician	916
Emergency Medical Responder	74
Emergency Medical Technician	6,242
Intermediate	289
Paramedic	4,831
Total	12,352

Figure 26. Five Most Common Causes of Injury in 2017 (Children Age 0 to 18 Years Old)



EMS Training

OEMS routinely trains EMS personnel on how to effectively deal with various types of injuries. Among the training that EMS personnel receive is developing a primary impression, which is the paramedics' first impression of the patient when they arrive on the scene. This primary impression is recorded to compare the complaint reported to the dispatch to the final diagnosis.

Figure 27. Five Most Common Primary Impression Criteria

Primary Impression Type	Count of Events
Traumatic Injury	74,410
Abdominal Pain/Problems	41,337
Respiratory Distress	40,944
Chest Pain/Discomfort	35,996
Behavioral/Psychiatric Disorder	33,018

CENTER FOR EMERGENCY PREPAREDNESS

The Center for Emergency Preparedness (CEP) is responsible for coordinating disaster preparedness and response for the department and serves as the coordinating entity for Emergency Support Function (ESF) 8, Health and Medical, for the state during emergency responses.

CEP is solely funded by federal grants. The Centers for Disease Control and Prevention (CDC) provided \$8,786,614 to the Alabama Department of Public Health during fiscal year 2016-2017, in a cooperative agreement to provide overall direction to and management of the department's assessment, planning, and response to acts of terrorism, outbreaks of disease, and other public health threats and emergencies such as meteorological, geological, chemical, and radiological disasters.

The Assistant Secretary for Preparedness and Response Hospital Preparedness Program provided \$3,213,182 in a cooperative agreement with the department for the same time period. These funds were designated to enhance health care system capability and capacity and preparedness for naturally occurring disasters or terrorist action resulting in mass casualties. Additionally, the CDC provided \$522,093 for preparedness and response to the Zika virus within the state.

CEP continued work on preparedness for outbreaks of serious infectious diseases through coordination with hospitals, emergency medical services, and other partners across the state to develop the Serious Infectious Disease Network which better prepares the state to deal with the threat of emerging serious diseases such as Ebola. This network consists of frontline health care facilities, assessment facilities, and a transport plan. From the frontline facility, patients with a serious infectious disease can be safely transported to an assessment facility where they can be cared for and diagnosed in an environment which protects both the patient and the staff caring for the patient. If necessary, the patient can then be transported to a regional treatment facility in Atlanta, Georgia, for specialized treatment.

Planning, partnership building, and exercises continue to be a focus of CEP. The Homeland Security Exercise and Evaluation Program (HSEEP) provides a set of guiding principles for exercise programs, as well as a common approach to exercise program management, design and development, conduct, evaluation, and improvement planning. CEP has an HSEEP trainer certified by the State Emergency

Management Agency and conducts exercises in accordance with HSEEP guidelines.

The State Mortuary Operations Response Team continued to train and exercise for response to a mass fatality event. Training and exercises involving the use of personal protective equipment were conducted to prepare health care workers to deal with patients suspected of having serious infectious diseases. All exercises and training activities include an element which addresses functional and access needs of the population of the state.

CEP has continued to actively participate in the Region IV Unified Planning Coalition (UPC). This coalition is comprised of the eight southeastern states. The UPC is involved in planning for state-to-state support prior to a major event and coordinates support of the eight states for each other through the Emergency Management Assistance Compact. CEP plays an important role in health care system preparedness. Infectious disease exercises are under development within each health care coalition. These exercises will allow participating members to refine how they work together to respond to serious emerging diseases.

CEP, in cooperation with the University of South Alabama Center for Disaster Healthcare Preparedness, conducted 13 Basic Advanced Regional Response training sessions on campus, 30 sessions as road shows across the state, 3 Crisis Standards of Care workshops, 5 Recovery Planning and Training workshops, 10 simulation trainings, and 1 Healthcare Emergency Professional Certification cohort. These trainings touched 1,868 students. Additionally, CEP conducted 39 Alabama Incident Management System exercises/notifications. The Training and Exercise Program of CEP conducted 6 training events and 22 exercises.

The Alabama Incident Management System (AIMS) is data capture software that gathers real-time information about hospital and other health care facility resources and activities and is the situational awareness tool for health care coalitions. During the 2017 grant year, AIMS experienced a tremendous expansion in utilization both in the number and type of users, but also witnessed a sharp increase in the use of AIMS as a primary communication tool for health care coalitions throughout the state. The overall management of AIMS shifted from a public health-centric tool to a user-centric tool. AIMS was activated a total of 87 times, 2 for actual events and 85 exercise activations.

BUREAU OF ENVIRONMENTAL SERVICES

The Bureau of Environmental Services ensures the wellness and safety of Alabamians by regulating food service establishments, milk production, lodging facilities, seafood production, soil testing, onsite sewage disposal, solid waste disposal, vector control, and indoor air quality and home lead inspections.

Environmental Operations Unit

This unit creates the infrastructure for the bureau by ensuring that the bureau performs proficiently, effectively, and professionally by developing environmental guidelines, policies, and performance standards that measure the efficiency and productivity of the state's environmental programs. The unit also serves as a facilitator for the bureau by providing structured training through workshops, seminars, and conferences for bureau and county personnel. By serving as a "checkpoint" for the bureau, local environmentalists are kept abreast of new and innovative technology, and are also provided professional development seminars.

Food, Milk, and Lodging

Food and Lodging Branch

- 49,701 inspections were conducted at food establishments, and 2,344 complaints received from the public concerning food establishments were investigated.
- 1,776 lodging inspections were conducted and 344 complaints received from the public concerning hotels were investigated.
- 269 body art facility inspections were conducted and 40 complaints received from the public concerning body art facilities were investigated.

Milk and Food Processing Branch

- 15,929 tests were reviewed and documented on samples collected for the presence of antibiotic drug residue in milk, a 5 percent increase from the previous year.
- 1,208 Certificates of Free Sale were issued allowing out-of-country sales of Alabama produced food and milk products, an over 4 percent increase from the previous year.

Seafood Branch

- The branch collected and analyzed 235 water samples in shellfish growing areas of Mobile Bay.
- The branch conducted 382 inspections of oyster, crab, and other seafood processing plants; 13 samples of oysters or crab meat were collected for laboratory analysis.

Community and Environmental Protection

The Onsite Sewage Branch issued 12,592 permits to install and repair onsite sewage systems and a total of 5,903 onsite sewage systems were issued an approval for use.

The Solid Waste/Vector Program provides information and education to individuals and communities on the storage and control of solid waste to minimize the threat of a health hazard, nuisance, or harborage for vermin or vectors. This program also permits and inspects solid waste collection vehicles and transfer stations. For fiscal year 2017, 2,300 'G' stickers (permits) were issued for collection vehicles. There were 2,359 solid waste complaints investigated.

More than 3,000 vector control complaints and 1,333 Zika-related complaints were investigated. Of the 46 septic tank manufacturers permitted in Alabama, 38 manufacturers were inspected in FY2017.

Indoor Air Quality/Lead Branch

The Indoor Air Quality/Lead Branch provides information and printed materials on issues related to indoor air quality, molds, lead-based paint, and other lead hazards. The branch is the Environmental Protection Agency-designated state indoor air contact providing advisory services for the state. Regarding the lead hazard program, the primary focus of the branch is to enforce the state regulations promulgated under the Alabama Lead Reduction Act of 1997.

Lead Contractor Certification Program activities:

- Certification of firms to conduct lead-based paint activities: 46
- Inspection of lead project sites: 96
- Outreach and education contractors' compliance assistance: 58
- Numbers of state lead regulations violations noted: 27

Childhood Lead Poison Prevention Program activities:

- Lead outreach (inspections and awareness) workshops: 32
- Inspection of homes with cases of children with high blood lead: 76
- Environmental lead sampling of dust, soil, water, and paint chips (approximate): 1,900

Soil Branch

Small Flow Evaluations	449
Large Flow Evaluations	17
Soil Courses Taught	33 (257 Students)

BUREAU OF FAMILY HEALTH SERVICES

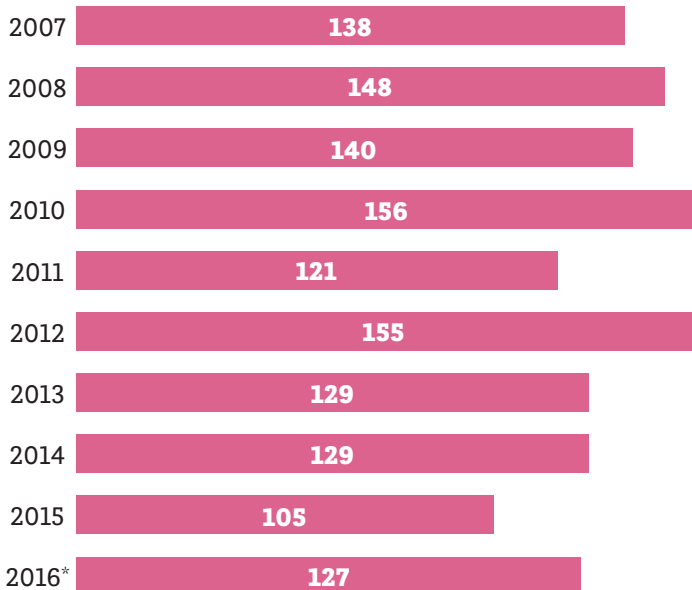
Cancer Prevention

Alabama Breast and Cervical Cancer Early Detection Program

The Alabama Breast and Cervical Cancer Early Detection Program (ABCCEDP) has provided free breast and cervical cancer screening and diagnostic services for Alabama's underserved women for more than 20 years. The goal of the ABCCEDP is to reduce breast and cervical cancer related morbidity and mortality through screenings in underserved populations in the state of Alabama. Eligible populations for the screenings are women ages 40-64, uninsured or underinsured, and whose income is at or below 250 percent of the federal poverty level. Women ages 30-39 who had a tubal ligation are eligible for cervical cancer screening services only. Women who have a personal history of breast or cervical cancer are eligible for screening services irrespective of age.

Breast cancer screening includes free clinical breast exams and biennial mammograms. Cervical cancer screening includes free pelvic exam, Pap smear, and human papillomavirus (HPV) test. If needed, diagnostic services such as diagnostic mammograms, ultrasounds, surgical consultations, biopsies, and colposcopies are provided. Screening and diagnostic services are provided statewide through contracted physicians, surgeons, and hospitals and county health departments. If a patient is diagnosed with breast cancer or cervical pre-invasive or invasive cancer, she is eligible to receive treatment through the Alabama Medicaid Agency. Early detection of breast and cervical cancer can save lives. Since 2007, a total of 1,348 breast cancers and 1,143 cervical pre-invasive and invasive cancers have been diagnosed through ABCCEDP. Pre-invasive cervical cancers are cervical intraepithelial neoplasias I, II, and III.

Figure 28. ABCCEDP Diagnosed Breast Cancers by Year*



*Most recent data available.

Alabama Statewide Cancer Registry

The Alabama Statewide Cancer Registry, a population-based cancer registry, is an information system designed for the collection,

Figure 29. Alabama Cancer Incidence Rates by Site and Sex, 2006-2015 Combined*

	Male		Female	
	Rate	Count	Rate	Count
All Sites	550.4	135,168	398.2	116,994
Bladder	33.5	7,750	7.5	2,323
Brain and Other Nervous System	7.8	1,872	5.7	1,569
Breast	1.3	320	120.4	35,055
Cervix Uteri	-	-	8.8	2,216
Colon and Rectum	54.3	13,154	38.8	11,650
Esophagus	8.4	2,137	1.7	522
Hodgkin Lymphoma	2.7	630	2.1	514
Kidney and Renal Pelvis	22.2	5,543	11.7	3,475
Larynx	8.5	2,197	1.8	540
Leukemia	15.6	3,620	9.6	2,746
Liver and Intrahepatic Bile Duct	10.1	2,618	3.5	1,068
Lung and Bronchus	96.0	23,466	53.0	16,286
Melanoma of the Skin	27.5	6,531	15.7	4,355
Myeloma	7.8	1,892	5.4	1,629
Non-Hodgkin Lymphoma	19.7	4,670	13.6	4,056
Oral Cavity and Pharynx	20.2	5,122	7.1	2,106
Ovary	-	-	11.9	3,507
Pancreas	14.4	3,507	10.8	3,324
Prostate	140.4	36,144	-	-
Stomach	8.8	2,088	4.7	1,400
Testis	4.5	997	-	-
Thyroid	4.7	1,154	12.6	3,277
Uterine (Corpus and Uterus, not otherwise specified)	-	-	19.0	5,729

*Most recent data available. Rates are per 100,000 and age-adjusted to the 2000 U.S. (19 age groups) standard. Rates and counts are for malignant cases only with the exception of bladder and groups that contain bladder.

management, and analysis of cancer data. The purpose of the cancer registry is to collect accurate and up-to-date information about cancer in Alabama. The cancer data is then disseminated to public health and medical professionals, community groups, volunteer agencies, and others who are interested in cancer prevention and control. Cancer is the second leading cause of death in Alabama, exceeded only by heart disease. Approximately 1 in 3 people will be diagnosed with cancer at some point in his or her lifetime. Effective prevention measures exist to substantially reduce the number of new cancer cases each year and to prevent cancer deaths. Cancer surveillance serves as the foundation for a comprehensive strategy to reduce illness and death from cancer and enables health professionals to better understand the cancer burden. The registry plays a significant role in disseminating data to aid efforts to reduce the burden of cancer in Alabama.

Alabama Comprehensive Cancer Program

The Alabama Comprehensive Cancer Program facilitates the statewide Alabama Comprehensive Cancer Control Coalition. The coalition is a statewide group of cancer-related organizations and advocates that are responsible for assessing the burden of cancer, determining priorities for cancer prevention and control, and implementing the 2017-2022 statewide comprehensive cancer control plan. The vision is to eliminate the burden of cancer in Alabama. The current 5-year goals are to expand partnerships; decrease the number of Alabamians affected by tobacco; increase the number of Alabamians receiving the HPV vaccination; reduce Alabamians’ cancer risk by decreasing their exposure to ultraviolet light; strengthen survivorship, hospice, and palliative care; and increase Alabamians’ access to clinical trials. Healthy lifestyle choices such as a proper diet, regular exercise, and participation in checkups and screenings are vital. The program and coalition seek community members and organizations who are interested in setting the state’s agenda for cancer control.

FITWAY Colorectal Cancer Prevention Program

The FITWAY Colorectal Cancer Prevention Program works to increase colorectal cancer screening rates to 80 percent by 2018. This is done by using evidence-based practice interventions at clinics targeting low income and uninsured persons. Current partnering clinics are Christ Medical Center, Cooper Green Mercy Health Services, Jefferson County Department of Health, and University of South Alabama Mitchell Cancer Institute.

The program also oversees legislative funds to provide colorectal and prostate cancer screening for underserved men and women. Over the past year, the colorectal cancer funding was used to screen 123 persons. The prostate cancer funding was used to screen 1,443 persons.

Oral Health Office

During the past year, 78 public water systems across Alabama received Quality Fluoridation Awards, provided by the Centers for Disease Control and Prevention (CDC) and the Association of State and Territorial Dental Directors. These systems were recognized for providing optimal levels of fluoride for preventing tooth decay through their public water supply during the 2016 calendar year, the most recent year award recipients have been honored. Decatur Utilities received commendation for providing 50 consecutive years of community water fluoridation.

The Fluoridation Program announced the availability of fluoridation grants for water systems to begin fluoridating, to expand an existing fluoridation program, or replace aging equipment. Request for proposals were submitted to all public water systems statewide. The total available funding notice was \$100,000. These grants will prove invaluable towards helping the selected public water systems provide quality drinking water to Alabama communities.

Staff provided dental screenings and fluoride varnish applications for 1,680 Head Start, Early Head Start, and Pre-K children in 52 programs statewide. Approximately 3,700 oral hygiene kits and classroom education materials were distributed through these visits. Additionally, staff collaborated with the Alabama Dental Association Dental District volunteers to provide classroom education and oral hygiene instruction for over 29,000 elementary school children from underserved school systems throughout the state. Free toothbrushes, dental floss, and toothpaste were provided by the office to support National Children’s Dental Health Month programs.

A public information specialist was added to promote and coordinate fluoridation activity and develop and implement oral health awareness campaigns and a new dental director was hired. The dental director will collaborate with key stakeholders to develop a new state oral health plan, promote new fluoridation legislation, promote new oral health policies and procedures, and implement other initiatives to improve the oral health status of Alabama citizens statewide.

Figure 30. Public Water Systems Receiving Fluoridation Quality Awards During 2017

Surface Water Systems
Albertville Utilities Board
Alexander City Water Department
Anniston Water Works
Athens Water Department
Auburn Water Works
Bessemer (Government Utilities Services Corporation)
Birmingham Water Board
Central Elmore Water & Sewer Authority
Centre Water & Sewer Board
Chattahoochee Valley Water Supply Distribution
Colbert County Rural Water System
Cullman Utilities Board
Decatur Utilities
Fayette Water Works Board
Five Star Water
Gadsden Water Works

Guin Water & Sewer Board
Guntersville Water Works & Sewer Board
Hamilton Water Works & Sewer Board
Heflin Water Works
Huntsville Utilities
Jackson Water & Sewer
Lafayette Water Works
Madison County Water Department
Mobile Area Water Service System
Montgomery Water Works
Muscle Shoals Water Department
North Marshall Utilities
Northport Water Treatment Facility
Phenix City Utilities
Pine Hill Water Department
Russell County Water Authority
Russellville Water & Sewer Board
Scottsboro Water, Sewer, & Gas Board
Section-Dutton Water System
Sheffield Utilities Department
Shelby County Water Services
Smiths Water & Sewer Authority
Sylacauga Utilities Board
Talladega Water & Sewer Board
Talladega-Shelby Water Treatment Plant
Tallassee Water Works
Trussville Utilities
Tuscaloosa Water & Sewer
Tuscumbia Water Works
Tuskegee Utilities
Utilities Board of the City of Opelika
Warrior River Authority

Ground Water Systems
American Water Enterprise
Atmore Utility Board
Brewton Water Works
Daleville Water & Sewer Board
Daphne Utilities Board
Dothan Water Utilities
Enterprise Water Works
Eufaula Water Works
Evergreen Water Works
Fairhope Water Department
Foley-Riviera Utilities
Fort Deposit Water & Sewer Board
Gordo Water Gas & Sewer
Grand Bay Water Works Board
Gulf Shores Utilities Board
Harvest-Monrovia Water & Sewer
Jacksonville Utilities
Luverne Water & Sewer Department
Marion Water Department
Monroeville Water Service
North Baldwin Utilities
Orange Beach Water System
Ozark Utilities Board
Perdido Bay Water System
Saraland Water Service
Selma Water Works & Sewer Board
Spanish Fort Water System
Tri Community Water System
Troy Utilities Company

Women, Infants and Children (WIC) Program

The Special Supplemental Nutrition Program for Women, Infants, and Children serves women who are pregnant, recently had a baby, or are breastfeeding; infants; and children up to the age of 5 years. To qualify to receive WIC benefits, the applicant must meet income guidelines and have at least one nutrition risk documented. Benefits provided by the WIC Program include quality nutrition education and services, breastfeeding promotion and support, referrals to maternal and child health care services and other assistance agencies, and supplemental foods prescribed as a monthly food package.

Perinatal Health

State Perinatal Program

The purpose of the State Perinatal Program is to identify and recommend strategies that will effectively decrease infant morbidity and mortality to improve maternal and infant health through a system of regionalized care and to provide leadership in establishing program priorities. Program activities include fetal and infant mortality reviews, promotion and education of a safe sleep environment, promotion of the Text4Baby campaign, promotion and education of the Alabama Perinatal Regionalization System Guidelines, improving breastfeeding, participation on state and national committees to reduce infant mortality, and provision of outreach and education to providers and the public. The program reviewed 230 fetal and infant deaths in 2017.

Maternal and Child Health (MCH)

The MCH Program coordinates the federal MCH Title V Block Grant activities. The MCH Title V Block Grant was awarded to the department in 1989 and has recently undergone a transformation. MCH Title V Block Grant services to Children and Youth with Special Health Care Needs are administered, through a contract, by the Alabama Department of Rehabilitation Services Children's Rehabilitation Service (CRS). The Alabama MCH Program staff seeks to change the ways in which the grant is administered and to better align with the objectives and goals of the newly transformed block grant. Through the MCH 3.0 Transformation, states were to select national measures across six population health domains. Also, states have to select evidence-based or evidence-informed strategy measures (ESM) for each of the selected national performance measures. MCH staff are tasked with working with program directors to identify and implement ESMs for programmatic focus. Through many continuous improvement cycles, program directors will determine whether to continue on the selected path or start anew. Alabama MCH priority needs for 2016-2020 and the evidenced-informed strategies to address the needs are in Figure 33.

Newborn Screening

The Alabama Newborn Screening Program (ANSP) is a coordinated system encompassing screening, follow-up, care coordination, evaluation, diagnosis, intervention, and management of newborn screening conditions. The goal of the program is to identify disorders early enough to reduce infant morbidity, death, intellectual disability, and other developmental disabilities. The newborn screen includes the bloodspot screen, newborn hearing screen, and pulse oximetry screen to detect critical congenital heart defects. The Alabama Birth

Figure 31. Average Participation for WIC, 2017

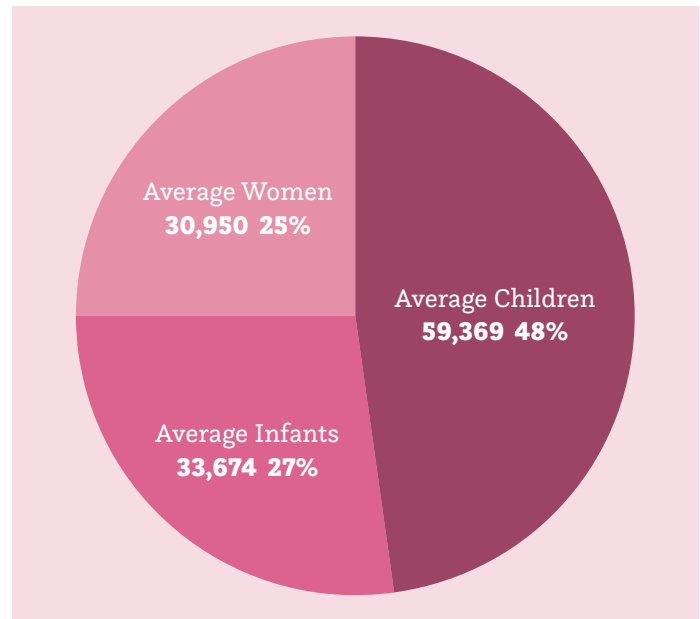


Figure 32. WIC Redemptions by Public Health Area, 2017

Public Health Area (PHA)	FY 2017 WIC Redemptions
PHA 1 (Colbert, Franklin, Lauderdale, Marion, Walker, and Winston Counties)	\$7,464,392.01
PHA 2 (Cullman, Jackson, Lawrence, Limestone, Madison, Marshall, and Morgan Counties)	\$17,419,765.85
PHA 3 (Bibb, Fayette, Greene, Lamar, Pickens, and Tuscaloosa Counties)	\$6,656,252.53
PHA 4 (Jefferson County)	\$12,674,320.26
PHA 5 (Blount, Cherokee, DeKalb, Etowah, St. Clair, and Shelby Counties)	\$9,238,391.49
PHA 6 (Calhoun, Chambers, Clay, Cleburne, Coosa, Randolph, Talladega, and Tallapoosa Counties)	\$8,966,554.17
PHA 7 (Choctaw, Dallas, Hale, Lowndes, Marengo, Perry, Sumter, and Wilcox Counties)	\$4,126,774.59
PHA 8 (Autauga, Bullock, Chilton, Elmore, Lee, Macon, Montgomery, and Russell Counties)	\$15,178,930.33
PHA 9 (Baldwin, Butler, Clarke, Conecuh, Covington, Escambia, Monroe, and Washington Counties)	\$8,567,338.62
PHA 10 (Barbour, Coffee, Crenshaw, Dale, Geneva, Henry, Houston, and Pike Counties)	\$8,575,637.96
PHA 11 (Mobile County)	\$11,141,663.81
Totals	\$110,010,021.62

Figure 33. Alabama MCH Priority Needs and NPMS by Domain, FY2016 - FY2020

MCH Population Domain	National Performance Measures (NPMS)	Priority Needs	Evidence-Based/Informed Strategy Measures (ESMs)
Women/ Maternal Health	NPM #1: Well Woman visit (Percent of women with a past year preventive medical visit)	<ul style="list-style-type: none"> Lack of or inadequate access to comprehensive reproductive and Well Woman health care 	<ul style="list-style-type: none"> ESM – NPM #1: Increase the proportion of women age 12-55 who report receiving a preventive visit in the past 12 months by piloting Well Woman in two county health departments by December 2017
Perinatal/ Infant Health	NPM #5: Safe sleep (Percent of infants placed to sleep on their backs) NPM #3: Perinatal regionalization (Percent of very low birth weight (VLBW) infants born in a hospital with a Level III+ Neonatal Intensive Care Unit (NICU))	<ul style="list-style-type: none"> Lack of awareness of and trust in safe sleep recommendations Desire to maintain and strengthen regionalized perinatal care 	<ul style="list-style-type: none"> ESM – NPM #5: To conduct the Direct on Scene Education (DOSE) Train-the-Trainer Program to first responders in order to reduce Alabama's high rate of unsafe sleep-related deaths in infants less than 1 year of age. ESM – NPM #3: To conduct a Healthy Babies are Worth the Wait (HBWW) campaign to develop interventions that will effectively reduce preterm births in Alabama.
Child Health	NPM #6: Developmental screening (Percent of children, ages 10 through 71 months, receiving a developmental screening using a parent-completed screening tool)	<ul style="list-style-type: none"> Low rates of preventive health and developmental screening for children 	<ul style="list-style-type: none"> ESM – NPM #6: To establish a working agreement with the Alabama Partnership for Children to utilize its online parent-completed developmental assessment tool, ASQ-3, in order to increase and improve overall health and development.
Adolescent Health	NPM #10: Adolescent well-visit (Percent of adolescents, ages 12 through 17, with a preventive medical visit in the past year)	<ul style="list-style-type: none"> Low rates of preventive health and developmental screening for adolescents 	<ul style="list-style-type: none"> ESM – NPM #10: Partner with the University of Alabama at Birmingham Leadership and Education in Adolescent Health Project to provide training and clinical practice quality improvement on youth-centered care to clinicians and other clinic staff using the Bright Futures model.
Children with Special Health Care Needs (CSHCN)	NPM #11: Medical Home (Percent of children with and without special health care needs having a medical home) NPM #12: Transition (Percent of adolescents with and without special health care needs who received services necessary to make transitions to adult health care)	<ul style="list-style-type: none"> Lack of or inadequate access for CSHCN to family-centered, coordinated, ongoing comprehensive care within a medical home Lack of or inadequate access to services necessary for CSHCN to transition to all aspects of adult life 	<ul style="list-style-type: none"> ESM – NPM #11: <ol style="list-style-type: none"> Number of enrollees in the State CSHCN program with a comprehensive plan of care. Number of providers receiving education/training about family-centered care. ESM – NPM #12: <ol style="list-style-type: none"> Number of CSHCN enrolled in the State CSHCN program with a transition plan in place. Number of the State CSHCN program clinics who adopt the Six Core Elements of Health Care Transition.
Cross-Cutting or Life Course	NPM #13: Oral health (A. Percent of women who had a dental visit during pregnancy and B. Percent of children ages 1 through 17 who had a preventive dental visit in the past year)	<ul style="list-style-type: none"> Inadequate and insufficient health education and outreach pertaining to oral health Inadequate health and dental insurance for all Title V populations 	<ul style="list-style-type: none"> ESM – NPM #13: <ol style="list-style-type: none"> Increase the proportion of infants and children, ages 1 through 17 years, who report receiving a preventive dental visit in the past 12 months by piloting the Home by One Program. Increase the proportion of at-risk pregnant women who report receiving a preventive dental visit during pregnancy by piloting the First Steps Program.

Defects Surveillance Program continues to build the infrastructure for birth defects surveillance to promote prevention, education, and intervention activities. Newborn screening is mandated by public health law and is a collaborative effort between the Bureau of Clinical Laboratories, which performs blood analysis of approximately 150,000 specimens each year, and the Bureau of Family Health Services, which performs follow-up and education

activities. Currently, Alabama screens for 30 of 34 nationally recommended conditions as a part of the Recommended Uniform Screening Panel, but Alabama has continued the process to implement screening for Severe Combined Immunodeficiency. In 2017, approximately 197 infants were identified early with a genetic condition through newborn screening. Infant lives were saved and improved through early screening and detection.

Figure 34. Newborn Screening Primary Disorder Confirmed, 2017

Citrin Deficiency (secondary condition)	1
Classical Galactosemia	1
Congenital Adrenal Hyperplasia	5
Congenital Hypothyroidism	28
Cystic Fibrosis	11
Galactosemia	3
Glutaric Acidemia	1
Hearing Loss	71
Hemoglobin S/Beta Thalassemia	5
Hemoglobin SC Disease	18
Hemoglobin SS Disease	40
Hyper-Phe	2
Medium-chain Acyl-CoA Dehydrogenase Deficiency	7
Phenylketonuria (PKU)	2
Propionic Acidemia	1
Very Long chain Acyl-CoA Dehydrogenase Deficiency	1
Totals	197

MCH Epidemiology

The mission of the MCH Epidemiology (MCH Epi) Branch is to utilize research and analysis to assess needs to impact public health policy that will assure the healthiest conditions for the state's MCH populations. MCH Epi Branch staff, through various data requests, research studies, submit required application/reports, and disseminate information regarding past and current emerging indicators related to the health of MCH populations. The branch administers the MCH Title V Block Grant Annual Report, the State Systems Development Initiative Project, and the Pregnancy Risk Assessment Monitoring System (PRAMS) Project. The PRAMS Project is a joint research project between the Alabama Department of Public Health and the Centers for Disease Control and Prevention. The purpose of this program is to find out why some babies are born healthy and others are not. To do this, a questionnaire asks new mothers questions about their behaviors and experiences around the time of their pregnancy. Approximately 1,400 Alabama mothers per year are randomly selected from the state birth certificate registry to receive the questionnaire for completion. Responses to the survey are used to help improve the health of mothers and babies in Alabama.

The branch also provides support to the following programs within the Bureau of Family Health Services: the Alabama State Perinatal Program, which includes the Fetal and Infant Mortality Review Program and the Collaborative Improvement and Innovation Network

to Reduce Infant Mortality; the Family Planning Program; the Women's Health Medical and Social Work Programs; the Childhood Lead Program; the Newborn Screening and Newborn Hearing Screening Programs; and the Alabama Zika and Birth Defects Surveillance Program, which is currently under development.

Women's and Children's Health

The Women's and Children's Health Division is comprised of the Adolescent Pregnancy Prevention, Social Work, Family Planning, and Healthy Child Care Alabama Programs.

The Adolescent Pregnancy Prevention Branch contains the Alabama Abstinence Education Grant Program, which provides abstinence education to middle school youth in 22 Alabama counties through grants to youth-serving organizations and the Alabama Personal Responsibility Education Program (APREP), which provides education regarding abstinence and contraception to youth age 10-19 through grants to youth-serving organizations. APREP reached more than 7,000 youth in 2017. The goals of the program are to provide youth the information and skills to avoid the risks of early sexual involvement and to prevent unplanned pregnancy and sexually transmitted infections, including HIV/AIDS.

The Social Work Unit provides case management services to the Newborn Screening, Lead, and Family Planning Programs, women who have experienced an adverse pregnancy outcome, children in need of follow-up dental care, and children in need of specialty services from Children's of Alabama. The Social Work Unit completed 37,007 referrals in Patient 1st, including 327 lead referrals, 1,137 newborn hearing referrals, and 76 newborn screening referrals in fiscal year 2017. In the Plan First program, 26,535 unduplicated patients were served. The unit also collaborates on grants with the Department of Human Resources to ensure children enrolled in Early Head Start attend medical and dental appointments and the Department of Mental Health on Project LAUNCH to develop an infrastructure for early childhood mental health.

The Family Planning Program provided education and counseling, medical examinations, laboratory tests, and contraceptive supplies to approximately 83,000 individuals of reproductive age in fiscal year 2017. Program goals include decreasing unintended pregnancies and assisting clients to plan and space the time between pregnancies.

The Child Health Branch is comprised of the Alabama Childhood Lead Poisoning Prevention Program (ACLPPP) and the Healthy Child Care Alabama (HCCA) Program.

ACLPPP is a collaborative effort of the Bureau of Family Health Services, Bureau of Environmental Services, and Alabama Medicaid. ACLPPP provides public outreach and education to spread awareness and increase the number of children screened. In addition, ACLPPP provides case investigation and management services to help identify the source of, and alleviate, lead exposure. Figure 35 lists the lead screening totals.

HCCA provides health and safety training and technical assistance to early childhood development providers throughout the state. In an effort to prevent injury and promote health, 12 nurse consultants work to provide first aid, safety, CPR, infection control, and poison prevention

Figure 35. Childhood Lead Screenings, 2010-2017

Calendar Year	Number of Children Reported	Number of Lab Reports with an Elevated Blood Lead Level
2010	40,422	587
2011	41,810	547
2012	40,445	534
2013	34,988	407
2014	31,948	537
2015	30,046	325
2016	32,273	312
2017	38,218	383

training. On April 1, 2017, HCCA began online documentation and reporting improving programming efficiency. Since that date, nurse consultants have documented 2,657 contacts with day care providers.

Office of Women's Health

The Alabama Office of Women's Health (OWH) provides statewide leadership and coordination to promote the health of women and girls through policy, advocacy, education, and partnership. The OWH achieves its mission and vision by educating health professionals

and motivating behavior change in consumers through the dissemination of health information. The office works in partnership with professional associations, community and faith-based organizations, schools and universities, health and social service providers, other state agencies, federal agencies, and programs. Two major 2017 initiatives included continued outreach for the prevention of Neonatal Abstinence Syndrome (NAS) and assisting with the implementation of a Well Woman pilot project in three Alabama counties: Butler, Dallas, and Wilcox.

The OWH continued collaborative efforts within the bureau to address NAS; efforts included hosting the first Opioid Misuse in Women/NAS Taskforce organizational meeting held in August 2017. Stakeholders from across the state attended. A follow-up operational meeting was held in December. These efforts were enhanced by support from the OWH Steering Committee members and the Alabama Chapter of the American Academy of Pediatrics.

Additional collaborative efforts within the bureau included the OWH's role in implementing the bureau's Maternal and Child Health Well Woman Program. The Well Woman Program creates the opportunity for women to receive recommended preventative services, screenings, and management of chronic diseases such as hypertension, and seeks to optimize the health of women before, during, and after pregnancy. The goal of the Well Woman Program is to provide preconception and interconception care to women of childbearing ages as a foundation for wellness.

BUREAU OF FINANCIAL SERVICES

The Bureau of Financial Services provides financial and cost accounting, accounts receivable, payroll, accounts payable, purchasing, budgeting, grant accounting, production planning, and administrative support to accomplish its goals in financial and cost accounting, reporting, and management for the department.

In fiscal year 2017, Financial Services managed the department's \$694 million budget using 298 internal budgets interfaced with 10 Executive Budget Office spending plan activities, and 197 internal funds interfaced with 13 State Comptroller's funds in the State Treasury. The bureau managed a total of more than 100 federal grants with a value in excess of \$476 million and 706 contracts totaling over \$330.7 million. Included in the federal grants accounted for were 5,327,412 Women, Infants, and Children (WIC) negotiable instruments issued to recipients paid with a redeemed food value of \$98.7 million, including \$31.3 million received from the department's infant formula rebate contract.

The bureau provided fiscal agent services in the form of payroll, procurement, accounts payable, contract payment processing, and budget management to the Family Practice Rural Health Board and the Board of Medical Scholarship Awards.

Additionally, the bureau provides all accounting services for the Alabama Public Health Care Authority (the authority). The State Committee of Public Health authorized the department to establish the authority as a public corporation in 1995. The mission of the authority is to build, furnish, and equip public health facilities throughout Alabama.

The authority has completed the Phase I, II, and III building programs which included constructing and renovating 61 facilities, and continues to propose and develop solutions for additional public health buildings and equipment needs.

Figure 36. Public Health Funding History

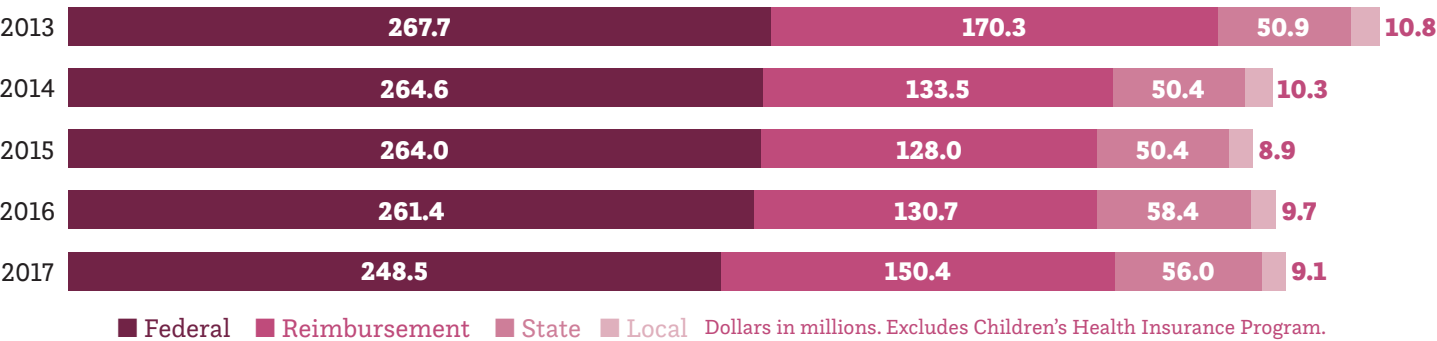


Figure 37. State Appropriations - Public Health

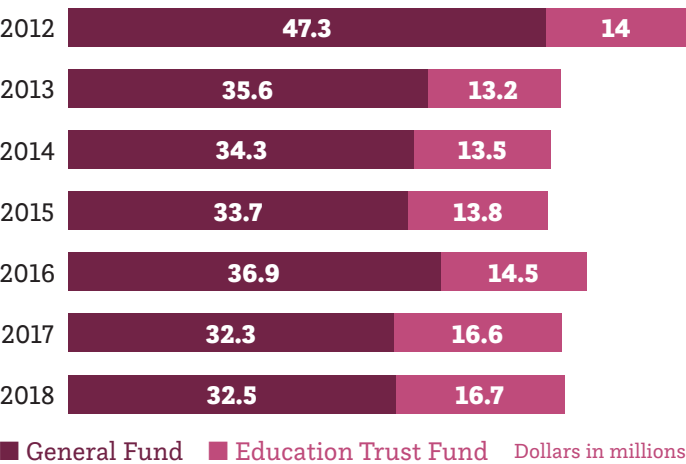
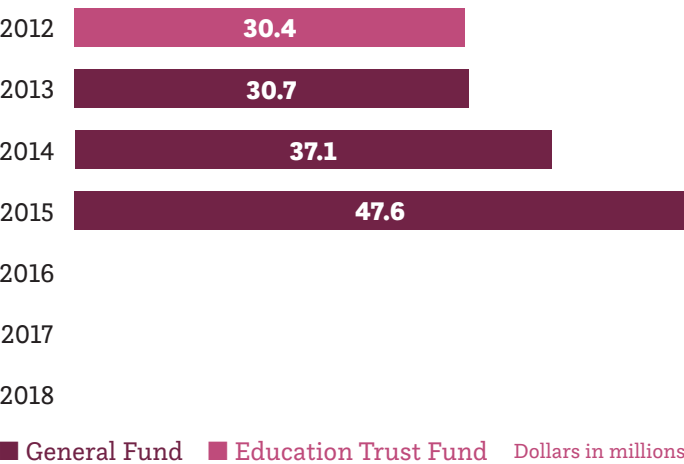


Figure 38. State Appropriations - CHIP



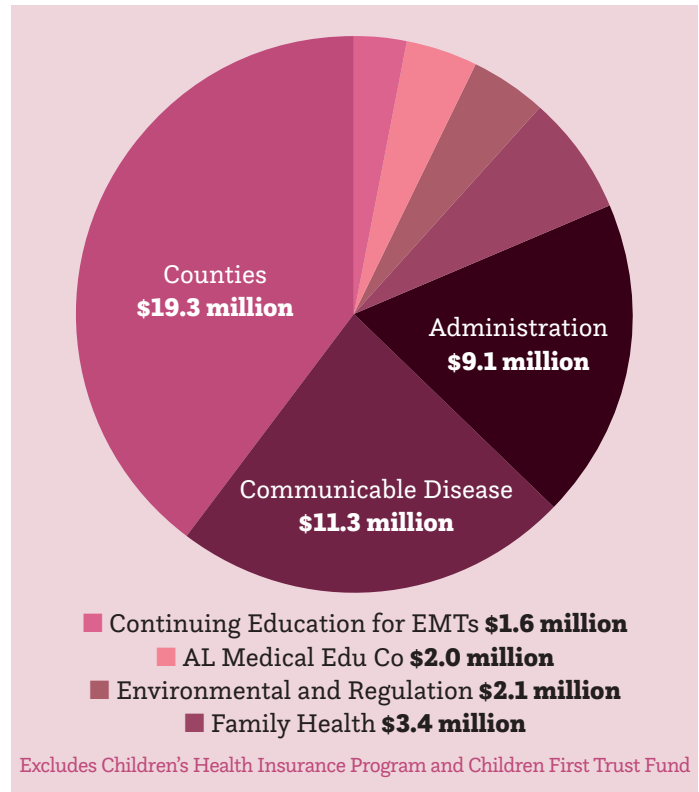
A Phase IV building program is ongoing and encompasses the following projects:

- Construction is pending on a new state laboratory with adjacent training center which includes office space.
- During fiscal year 2017, construction was completed on new health departments in Bullock and Morgan counties.

The authority manages the Alabama Public Health Capital Maintenance Trust Program which provides funding for a comprehensive, coordinated preventative maintenance improvement and replacement program for public health facilities in Alabama. The authority's construction management firm provides technical assistance, advice, and program monitoring. The program spent \$2,555,358 during fiscal year 2017 to provide the following services:

- Periodic facility inspections to identify deficiencies, repairs, and maintenance needs.
- Maintenance contracts for heating, ventilation, air conditioning systems, fire alarms, and fire sprinkler systems.
- Roof systems maintenance/repair and a full range of other maintenance repair expenditures and renovations to maintain public health facilities in good working order.

Figure 39. Use of State Funds - FY2017



BUREAU OF HEALTH PROMOTION AND CHRONIC DISEASE

Behavioral Health

Food and Drug Administration (FDA) Tobacco Inspection

The division began its seventh year working with the FDA Tobacco Inspection Program in 2017. The program entails trained inspectors entering establishments that sell tobacco products, performing thorough inspections, and ensuring that tobacco products are being sold at the point-of-sale, face-to-face, and not easily obtained on shelves or by underage minors. Inspectors also look for the sale of single cigarettes (sometimes called "loosies") at each location.

The FDA provides funding to the department to conduct two types of tobacco inspections:

- Advertising and Labeling - Inspections include inspecting every tobacco retailer in the state to ensure that retailers are following federal law when advertising, displaying, and selling regulated tobacco products.
- Undercover Buy - Inspections involving the department contracting with the Alabama Law Enforcement Agency to inspect every tobacco retailer in the state with the assistance of a trained, age-appropriate undercover minor to determine if the teenager (age 16 or 17) is able to purchase tobacco products in violation of the Federal Tobacco Act of 2009. Tobacco products now include cigars, little cigars, cigarillos, electronic cigarettes, pipe tobacco, hookahs, and any other products which contain "tobacco," giving the program an opportunity to increase its regulatory authority over the products that retailers are selling.

The branch conducted 5,855 inspections in 2017, which revealed a combined violation rate of 10.3 percent (up 6.6 percent from 2016). Alabama's compliance results are slightly higher because there is an expanded product list that is being inspected.

Tobacco Prevention and Control Program

Tobacco use continues to be the leading cause of preventable death in Alabama, killing in excess of 8,600 smokers and costing the state more than \$1.88 billion in direct medical expenses to treat smoking-related diseases each year. The tobacco program works to help tobacco users quit, prevent youth and young adults from starting tobacco use, and protect people from exposure to secondhand smoke.

The Tobacco Prevention and Control Program utilized resources to help tobacco users quit by obtaining Medicaid reimbursement for Quitline services, a \$308,365 grant from the Centers for Disease Control and Prevention (CDC) to build Quitline capacity, and \$562,766 in state funds to provide up to 8 weeks of nicotine replacement therapy patches, conduct targeted outreach efforts, and support the Alabama Tobacco Quitline. The program managed telephonic and web-based quitlines assisting 9,379 tobacco users in 2017.

The Youth Tobacco Program was awarded \$1 million to implement the mini-grant program to effect social norm change around tobacco use, address the marketing of emerging products to youth, promote policies that protect youth from nicotine initiation and exposure to secondhand smoke, and promote tobacco cessation.

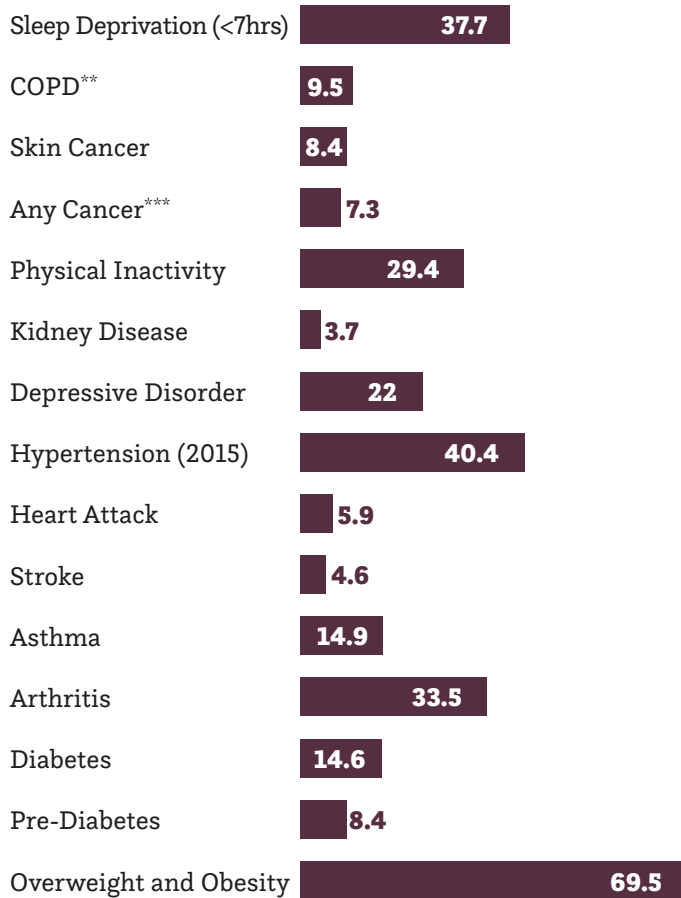
Program accomplishments include the following:

- The University of Alabama at Birmingham strengthened its smoke-free policy to a tobacco-free policy that includes electronic cigarettes.
- Crestwood Hospital in Huntsville implemented its tobacco-free policy. The policy protects 1,300 employees.
- Tobacco staff continues to assist Shelton State Community College pass and implement a smoke-free policy. The college was awarded a \$10,000, 2-year grant from the Truth Initiative. When implemented, this policy will protect 5,300 students, faculty, and staff.
- Talladega College implemented its tobacco-free campus policy, protecting 1,300 students, faculty, and staff.
- The University of North Alabama passed a smoke-free policy, protecting 8,822 students, faculty, and staff.
- Alabama has 18 smoke-free public housing agencies protecting 5,299 units and more than 13,230 residents.
- Media messages were delivered to targeted zip codes/zones. Digital ads reached 682,522 youth under the age of 18 with reported 17,980,946 digital impressions.
- There were 37,838 television airings of creative campaigns titled "Ice Cream Truck" and "Tobacco Blender" seen by 764,382 viewers, including 87,493 teens ages 12-17.
- Some 178 presentations were given to 19,639 students and 937 store audits were conducted.
- The cessation manager presented at two conferences to mental health professionals: the 2017 Certified Peer Support Specialists Conference and the Third Annual Substance Abuse Consumer Recovery Training conference of substance abuse patients.

Chronic Disease

Alabama Behavioral Risk Factor Surveillance System (BRFSS)

The Alabama BRFSS is the only available source of timely adult health behavior data in Alabama. The BRFSS is an annual phone survey of randomly selected adults. Alabama has conducted the BRFSS survey for more than 30 years. The Alabama BRFSS is part of a national survey system funded by the CDC. As with the rest of the nation, chronic diseases are the leading causes of mortality in Alabama, and are often the result of risky health behaviors. According to the 2016 Alabama BRFSS, more than one-third of Alabama adults (35.7 percent) are obese and 33.8 percent are overweight. In addition to chronic diseases, BRFSS provides Alabama with statistics related to injury

Figure 40. Prevalence of Chronic Diseases and Conditions, AL 2016*

*Latest complete data set. **Chronic Obstructive Pulmonary Disease

***Non-Skin Cancer

prevention, vaccinations, mental health, health care access, and other health risk behaviors. In 2016, 7,031 adults participated in the Alabama BRFSS survey. The data provided by Alabama BRFSS enables the development of evidence-based, data driven interventions targeted towards improving the health of Alabama's residents.

Cardiovascular Health Program

The Cardiovascular Health Program (CVHP) is a CDC-funded program committed to promoting quality programs for hypertension prevention and control. In 2017, CVHP implemented quality improvement and medication adherence programs with 4 community grantees that include 26 clinics and 29 pharmacies in 12 counties throughout Alabama. CVHP produced and distributed two satellite/On Demand programs, Blood Pressure 101 for Healthcare Professionals and Health Teams Work: Chronic Disease Prevention and Management. These two programs have reached more than 500 viewers to date.

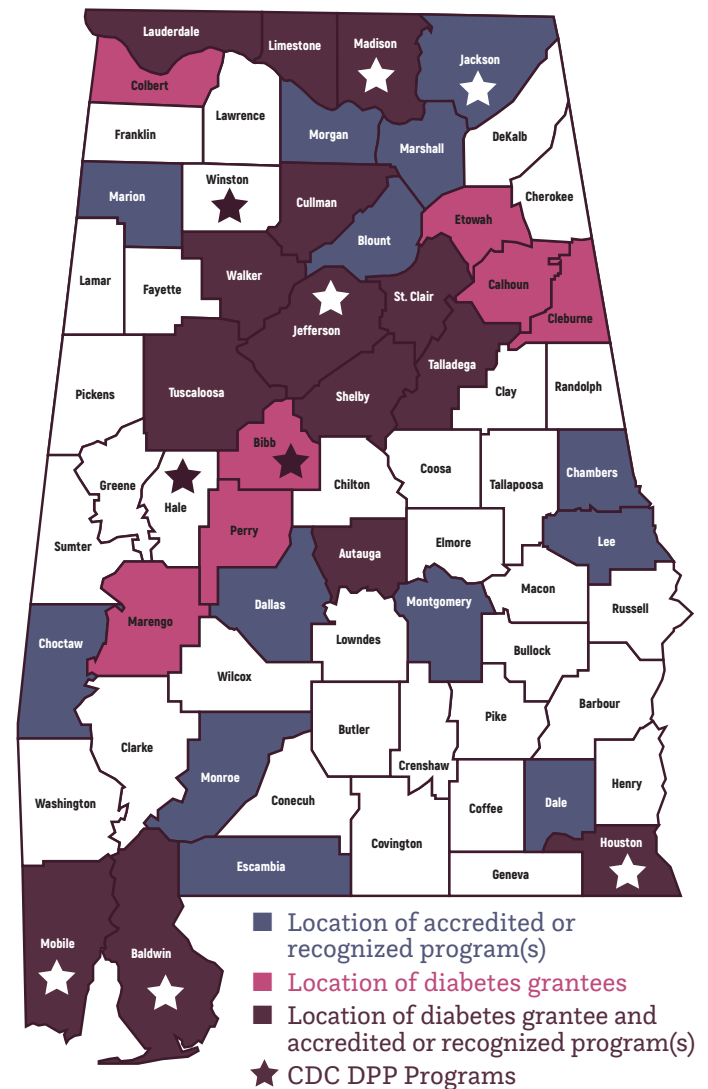
CVHP completed a follow-up program with Mobile County Health Department that includes Electronic Health Record (EHR) data from more than 11,000 patients diagnosed with hypertension. The earlier program received national attention from the Million Hearts™ campaign, the CDC, and the National Association of Chronic Disease Directors for newly diagnosing 1,380 hypertensive patients in Mobile County during a 7-month program. The "Hiding in Plain Sight" program

was designed to find undiagnosed patients with hypertension using a blood pressure protocol embedded in its EHR and increased awareness of early diagnosis by providers. The analysis of the follow-up study may show sustainability and continued blood pressure control.

Alabama Diabetes Control Program (ADCP)

The ADCP is funded through a CDC grant that focuses on clinical and community linkages to better support chronic disease management and prevention through supporting programs such as Diabetes Self-Management Education (DSME) and the CDC Diabetes Prevention Program (DPP).

DSME is the ongoing process of facilitating knowledge, skill, and ability necessary for diabetes self-care. Programs must meet the ten National Standards and apply for accreditation/recognition from the American Diabetes Association or the American Association of Diabetes Educators. Once the programs are accredited/recognized, they can be reimbursed from various insurance plans for the classes. There are approximately 50 accredited/recognized DSME main sites

Figure 41. Diabetes Care Programs by County

and 17 DPP sites in Alabama. The ADCP funded two lifestyle coach/DPP facilitator trainings, and awarded approximately \$90,000 to health care related agencies within the state to increase DSME programs. There were six mini grantees completing DSME projects in July, and presently there are five new grantees working to develop additional DSME sites in various counties throughout the state. With diabetes continuing to be a leading cause of death in Alabama, the department is committed to providing technical assistance to all diabetes programs around the state to combat this disease through support, training, partnerships, and marketing resources.

Communications and Health Marketing

The Communications and Health Marketing Division creates outreach materials, campaigns, documents, and training programs to educate both the public and staff about public health activities and initiatives, as well as facilitates more cost-efficient communication activities and printing services for the department. In addition, division staff establish and maintain agency presence on the Internet, including social media sites, by providing education, information, and alerts.

Digital Media

One of the goals of the Digital Media Branch is to research innovative ways to maximize the department's website (alabamapublichealth.gov) and social media networks to ensure departmental promotion, education, and dissemination efforts are reaching the broadest possible audience in the quickest, most efficient manner.

In 2017, the branch completed the transition to a new content management system and domain name alabamapublichealth.gov. During the transition, 150 contributors were trained to use the new system to edit their individual program websites. Thanks to an upgraded content management system, Public Health's website:

- Uses a responsive design that allows visitors using tablets, smart phones, and other mobile devices to view content more easily.
- Meets and exceeds Americans with Disabilities Act web accessibility standards.
- Better tracks and analyzes web traffic data.
- Increases the reach to the public through better search engine optimization.

The Digital Media Branch continues to assist in public health's transition from public health areas to public health districts. This transition has resulted in extensive reshuffling among the contributors in charge of the individual county health department websites and Facebook pages. In addition to training new contributors and re-assigning existing contributors, the branch has worked to ensure that the change is reflected throughout the public health website in the form of updated district maps and contact information.

Health Marketing

Numerous campaigns were created to educate the citizens of Alabama on health issues. Campaigns include the free mammogram program, human papillomavirus vaccinations, Scale Back Alabama, abstinence and family planning, and suicide prevention. Campaigns

are comprised of the usage of all media outlets including paid media, digital media, and public information.

A Marketing Vendor Information Fair was held in August for the first time. This was an opportunity for numerous marketing outlets to present to departmental employees about their product as well as for the employee to learn about the different options that are available in paid messaging to educate Alabamians. Sixteen different media outlets representing print, audio, visual, and digital media were present for the information session.

In-house Print Shop

The departmental in-house print shop produces black-and-white and color copies, business cards, letterhead, and envelopes that help reduce costs, reduce additional paperwork and product delivery time, and provide timelier response for as-needed projects.

Public Information

The goal of the Public Information Branch is to improve public health by disseminating information through the mass media and departmental publications and provide awareness of departmental objectives, activities, and services throughout the state.

Activities included preparing and distributing 86 news releases; providing assistance with news media campaigns for several programs; composing and distributing meeting summaries; editing a variety of documents including the department's official publication, *Alabama's Health*; distributing video monitoring reports; and answering and routing questions and comments from the department's website.

Distance Learning and Telehealth

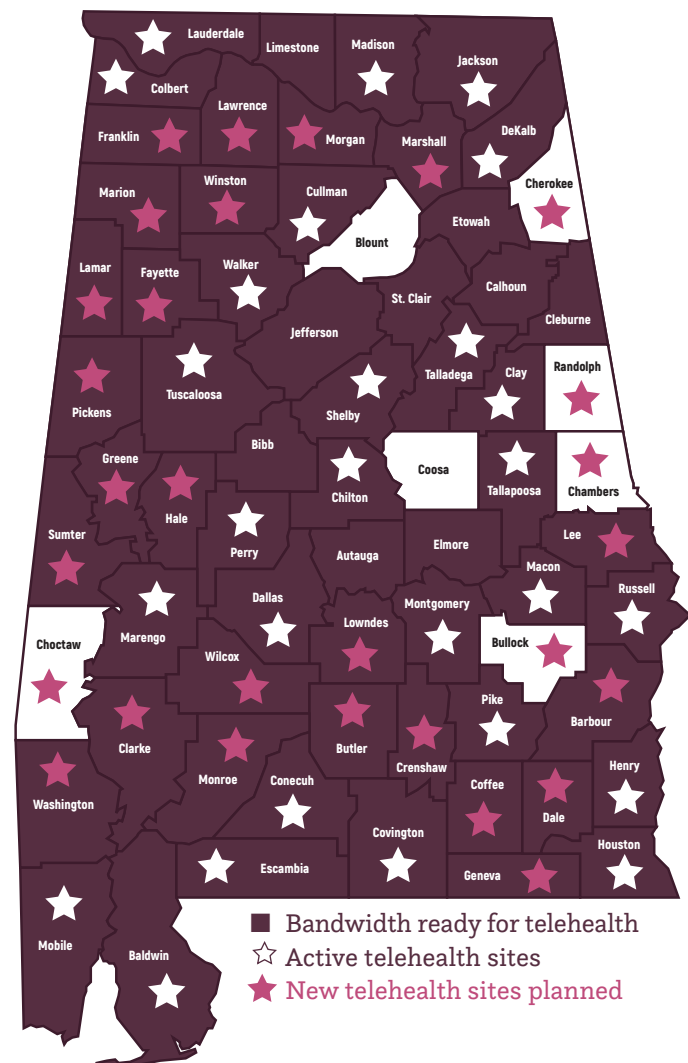
Telehealth

The Distance Learning and Telehealth Division continues to expand the telehealth network to county health departments throughout the state. The department has deployed a total of 29 telehealth carts. The newest telehealth partners are Children's Rehabilitation Services at the Alabama Department of Rehabilitation Services, where they provide clinical services to children with special needs; and diabetes education offered through the University of South Alabama.

Another exciting growth in telehealth is an expansion to the number of subspecialty services offered via telehealth by the Medical Center at the University of Alabama at Birmingham. The partnership currently includes nephrology visits and consults for dialysis patients, transplant nephrology consults, with plans to add these subspecialties soon: pediatric nephrology; genetic counseling; epilepsy; rheumatology; maternal fetal medicine; stroke follow-up; general neurology; infectious diseases; geriatrics; pediatric neurology and maternal and fetal medicine.

The department encourages the use of telehealth technology to facilitate staff meetings, training, and educational programs for efficiency and cost savings.

Figure 42. Telehealth Clinics at County Health Departments



Broadcast and Production Services

The Distance Learning and Telehealth Division provides departmental training, educational resources, public information, and emergency response to health professionals through live broadcasts and production services. For example, the division supported the Office of the Governor to broadcast critical information to the citizens of Alabama during five news conferences for Tropical Storm Cindy, Hurricane Irma, and Tropical Storm Nate.

The opioid epidemic is a rapidly growing crisis both in Alabama and across the nation. The abuse of prescription opioids has emerged as a widespread public health crisis, providing the opportunity to offer timely and relevant information to help educate and protect citizens. The Opioid Crisis in Alabama, a satellite and webcast broadcast, was one way the department brought awareness to this topic. The division also recorded presentations at the 2017 Opioid Summit: Crisis in Alabama, which are now available as on demand resources. In addition, the division partnered with the Regional Poison Control Center to make an online training resource for law enforcement officers, firefighters, and emergency medical technicians on the administration of naloxone – a lifesaving overdose emergency medication.

Nutrition and Physical Activity

The Nutrition and Physical Activity (NPA) Division is a team of experts who provide state leadership and speak for the department on nutrition, physical activity, obesity, and wellness. The vision for the NPA Division is for Alabamians of all ages to embrace a culture of healthy choices as their normal way of life.

During 2017, division staff conducted more than 40 statewide trainings and/or presentations to various audiences on healthy lifestyles and obesity-related issues.

Figure 43. Adult and Youth Obesity in Alabama

	Year	Percent	National Ranking
Adults	2016	35.7	3
Youth	2015	16.1	9

*Source: CDC BRFSS 2016 and Youth Risk Behavior Survey 2015. Latest complete data set.

Adults and youth in Alabama continue to have high rates of obesity. For people with disabilities, the rates are even higher. The state consistently ranks as one of the most obese states in the nation. NPA initiatives to address obesity in adults and youth consist of:

- Entering its twelfth year, Scale Back Alabama is an inclusive statewide weight-loss program that encourages Alabama to get healthy and have fun while doing so. The 2017 campaign drew in about 17,000 people from around the state. Total weight loss since inception is more than 1.35 million pounds. The Scale Back Alabama school program had impressive numbers with 117 schools enrolled. A phone application (app) was created to utilize technology for better communication of health messages to participants. In 2017, there were more than 2,300 users, a 50 percent increase since the app launched in 2015. Scale Back Alabama was highlighted in the national publication, Men's Health. It was recognized as a highly successful program for Alabamians to achieve healthy lifestyles and lose weight.
- The State Obesity Task Force (OTF) is a network of organizations and individuals who work to reduce and prevent obesity in Alabama. In collaboration with the OTF, representatives from the division worked with America Walks and the Project for Public Spaces to facilitate a State Collaborative Walkability Summit to strengthen partnerships with similar goals to improve physical activity levels by increasing walking and creating walkable communities. The summit brought together 45 stakeholders representing state agencies, statewide non-profits, and local communities who developed recommendations and action steps for creating a more walkable Alabama.
- Through funding from the CDC, the division is facilitating strategies to improve physical activity in Early Childhood Education (ECE) programs so that toddlers and infants are exposed to healthy habits early. Dr. Diane Craft from State University of New York in Cortland conducted a specialized, statewide training for Alabama pre-school teachers and ECE providers on fun, inclusive, and developmentally appropriate physical activity. In collaboration with the Alabama Partnership for Children, the Early Care and Education Learning Collaborative Project is addressing childhood obesity by

promoting healthy environments, policies, and practices in ECE settings through training, staff wellness programs, better nutrition practices, and strengthening standards of care.

- The Alabama Disability and Health Program is funded through a CDC competitive grant and works to improve the health and quality of life among people with mobility limitations and intellectual disabilities through adaptation and implementation of evidence-based strategies. In 2017, the program continued its long partnership with the Alabama Department of Education to promote quality physical education and encourage physical activity among all children and youth, including those with disabilities, by forming a task force which developed a Best Practices for Adapted Physical Education Guidebook. Training was provided to approximately 500 teachers on the developed guidebook.
- The Healthy Wellness Initiative (HWI) is a collaboration with the Alabama Department of Education to provide wellness, nutrition, and physical activity technical assistance, information, and training to the 21st Century Community Center Learning Program and Dependent Care grantees. HWI hosted a statewide training on CATCH Kids Club, an evidence-based physical activity and nutrition education program designed for children in grades K – 8 in after-school or recreation/summer settings which provide children with the knowledge and skills to make healthy food choices and be physically active for a lifetime. The initiative also hosted four regional trainings for after-school programs highlighting the connection between physical activity and improved academic performance.
- The Alabama State Office of Minority Healthy (SOMH) works to expand the knowledge and awareness of existing health disparities among minority populations to lead to the expansion and creation of health policies and strategies in order to eliminate such disparities. In 2017, SOMH worked with community partners on the following objectives: educating and encouraging Hispanic and Latina women on seeking early prenatal care in Tuscaloosa; developing and distributing community resource guides in Hale and Sumter counties; and developing a mobile community resource guide app that will interface with the existing Scale Back Alabama mobile app. The mobile community resource guide app will allow users in Tuscaloosa, Hale, Marengo, and Sumter counties to look up community resource information, access community event calendars, receive push notification health messages, and more. The SOMH is also supporting Healthy Places for Healthy People in Greensboro as the U.S. Environmental Protection Agency and the Appalachian Regional Commission collaborate with stakeholders and community leaders, local residents, and elected officials to strengthen the community and economy, and to promote healthy behaviors and lifestyles.
- The NPA Division worked closely with state universities to provide a public health rotation for dietetic interns. The rotation lays a foundation in public health for interns who will be future registered dietitians and encourages them to consider careers in public health. Staff worked with nine interns in 2017 giving them experiences in community nutrition initiatives that promote and support healthy behaviors.

School Health Program

The department continues to partner with the Alabama Department of Education and other state organizations to coordinate and sponsor physical activity and nutrition training, promote state and federal grant opportunities, and provide technical assistance to schools throughout the state as they all work to improve physical activity programming in schools, increase the amount of physical activity all students receive to 60 minutes per day, as well as their efforts to promote nutritious meals and smart snacks to students and their families.

The Alabama Champions for Healthy, Active Schools continued efforts this year by offering four different trainings. The district-level training consisted of ten district leaders. This training allowed the team of partners to help the district move forward in the process, re-connect with each district, and identify key areas that each district would like to work on in building a healthier district environment while reviewing wellness policies to make sure they are effective and updated.

The second training was a school-level training that more than 150 participants attended. This training worked with school contacts, from the districts present at the district-level meeting, to identify key areas that each school within the districts would like to work on to build a healthier school environment. The third training was held with universities to train them on the concept of a healthier school environment so they can go into their classrooms and begin to teach future professionals on the connection between learning and physical activity. Fourteen universities were present for this training. The fourth training was held for supporters and explained the initiative and the Champions' direction for the next school year. This training allowed partners to work together to decide where different organizations can contribute to the process and assist the schools. Thirty-three organizations were represented at this training.

Wellness

Public Education Employees' Health Insurance Plan Wellness

Public Education Employees' Health Insurance Plan (PEEHIP) Wellness is a joint project of the department and PEEHIP. In fiscal year 2015, PEEHIP mandated that members be screened or pay more for their medical insurance. Members had the opportunity to get a screening from August 2016, through August 2017, without being penalized. Department nurses performed 72,959 screenings at the worksite and physicians conducted an additional 33,996 screenings. During this same time frame, 42,358 received an influenza vaccine.

State Employees' Insurance Board Wellness Program

During fiscal year 2017, 20,317 state employees were screened by Wellness Program staff for the State Employees' Insurance Board (SEIB). A total of 8,479 SEIB employees received an influenza vaccine.

Local Government Health Insurance Board

During fiscal year 2017, 232 local employees were screened by Wellness Program staff for the Local Government Health Insurance Board (LGHIB). A total of 3,523 LGHIB employees received an influenza vaccine. A total of 3,523 LGHIB employees received an influenza vaccine in 2017, the first year the Wellness Program had a contractual agreement with LGHIB.

BUREAU OF HEALTH PROVIDER STANDARDS

The mission of the Bureau of Health Provider Standards is to improve quality of care and quality of life for health care consumers and to reduce adverse outcomes through the process of licensure, inspection, and certification of health care providers.

The bureau consists of several units that include Assisted Living, Medicare Other, Nursing Home, and Clinical Laboratory Improvement Amendment (CLIA). Each unit serves only in its specialty and performs license inspections, unannounced surveys for complaints and compliance, and certification surveys when required. Provider Services processes applications for initial licensure, certification, change of ownership, annual license renewal, and changes in provider information.

Medicare Other

The Medicare Other Unit successfully completed all of the required fiscal year (FY) 2017 Centers for Medicare and Medicaid Services (CMS) workload. Four current surveyors successfully completed the Basic CMS End Stage Renal Disease surveyor training course. This course is highly technical, requiring the use of a specialized skill set to understand water treatment systems, various dialysis modalities, and treatment delivery systems.

Long Term Care Unit

The Long Term Care Unit successfully completed all of the required FY2017 CMS workload. The statewide average interval requirement between consecutive standard health surveys must be 12.9 months or less. The average for FY2017 was 11.8 months for surveying 225 providers. Effective November 28, 2017, CMS rolled out an electronic

long term care survey process that will be utilized nationwide. Survey staff of the unit began the use of this electronic process immediately. As a requirement to be a long term care surveyor, surveyors must pass the federally mandated surveyor minimum qualifications test. During FY2017, eight surveyors had the opportunity to take this test with all eight successfully completing this requirement.

Assisted Living Facilities (ALFs)/ Specialty Care ALFs

The ALF Unit moved statewide surveyors from a central office location to various offices throughout the state. By basing registered nurse surveyors in county health departments near their homes, local survey staff were located in five different areas of the state. This move significantly increased surveyor morale and productivity. Locally based surveyors also allows for recruitment throughout the state, significantly increasing the potential labor pool.

Provider Services License and Certification Unit

Certification: There are 1,070 certified facilities and agencies in Alabama. In FY2017, there was a 5 percent increase in the number of certified facilities and agencies (1,008 to 1,070). The most significant changes related to End Stage Renal Disease treatment centers (+3 percent), hospices (+16 percent), and rural health clinics (+5 percent).

Licensure: The Provider Services License Unit continued to process applications for initial facility licensure and license amendments. The total number of licensed facilities increased by less than 1 percent.

Figure 44. Summary of Licenses and Investigations

Facility Type	Total Complaints Investigated	Facilities with Probational Licenses
Abortion Centers	0	0
ALFs/Specialty Care ALFs	280	3
Ambulatory Surgical Centers	0	0
End Stage Renal Disease Treatment Centers	5	1
Home Health Agencies	0	N/A
Hospitals	20	0
Hospice Agencies	5	0
Nursing Homes	365	0

Figure 45. Licensed Health Care Facilities and Agencies

Abortion or Reproductive Health Centers	5
Ambulatory Surgical Centers	41
ALFs	203
Specialty Care ALFs	101
Cerebral Palsy Centers	1
End Stage Renal Disease Treatment Centers	174
Freestanding Emergency Departments	3
Hospice Agencies	175
Hospitals	119
Independent Clinical Laboratories	491
Independent Physiological Laboratories	65
Nursing Homes	233
Rehabilitation Centers	29
Sleep Disorder Centers	18
Total	1,658

CENTER FOR HEALTH STATISTICS

The Center for Health Statistics operates the vital records system and collects and tabulates health-related statistical data for the state of Alabama. The center files, stores, and issues certified copies of vital records including birth, death, marriage, and divorce certificates for events that occur in Alabama. The center consists of the following divisions: Administrative Services, Quality Assurance and Registration, Record Services, Special Services, and Statistical Analysis.

More than 157,700 vital records were registered with the Center for Health Statistics in 2017, primarily electronically. An automated vital records system called ViSION, or Vital Statistics Image Oriented Network, allows vital records to be issued in all Alabama county health departments. Customers can obtain vital records from the center through county health departments in 30 minutes or less. Customers may also order records over the Internet, by telephone for next business day delivery, or by regular mail. All birth records are registered electronically with the Center for Health Statistics, and approximately 92 percent of divorce and 90 percent of death certificates are now registered electronically. In addition to registering vital records and issuing certified copies, the center corrects and amends birth and death records and creates new certificates after legal actions.

Statistical Analysis

The center's Statistical Analysis Division conducts studies and provides analyses of natality, pregnancy, general mortality, infant mortality, causes of death, marriage, divorce, and other demographic and health-related data for public health policy and surveillance. Results are distributed through numerous publications, reports, presentations, special tabulations, and the department's website to the public, news media, researchers, government or private agencies, and various units within the department.

Figure 46. Certified Copies of Vital Records Issued, 2017

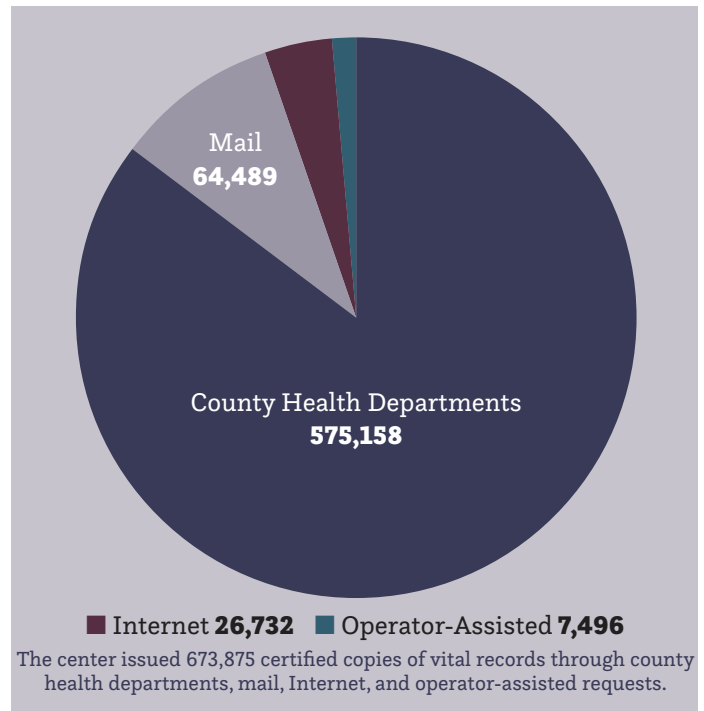
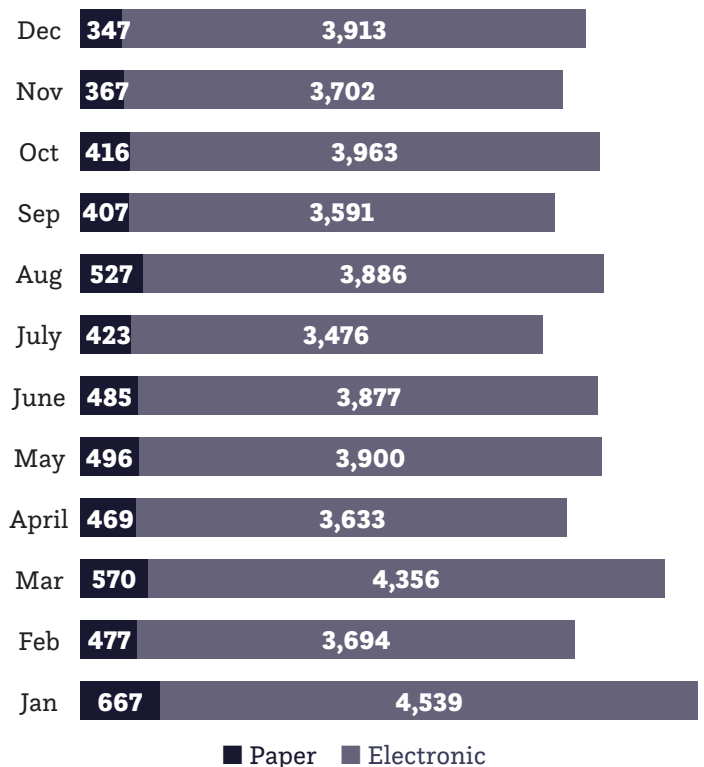


Figure 47. Electronic Death Registration, 2017



A regulation is now in effect that requires mandatory use of the Electronic Death Registration System for most persons involved in preparing and submitting death certificates. The center continues to increase the number of death records registered electronically, which allows families to obtain certified copies more quickly.

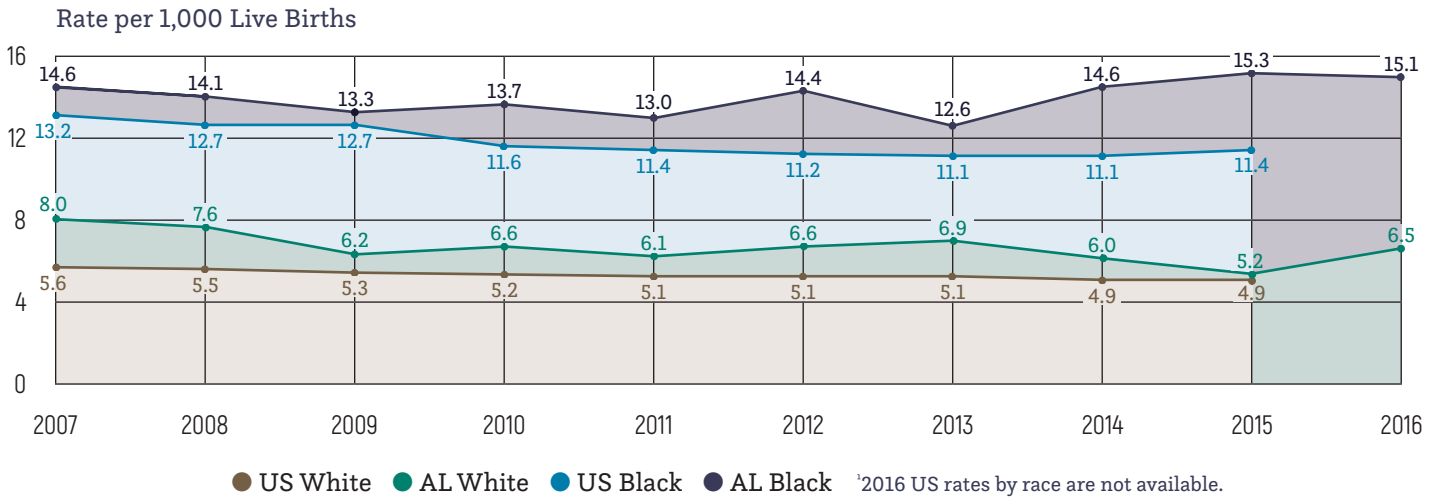
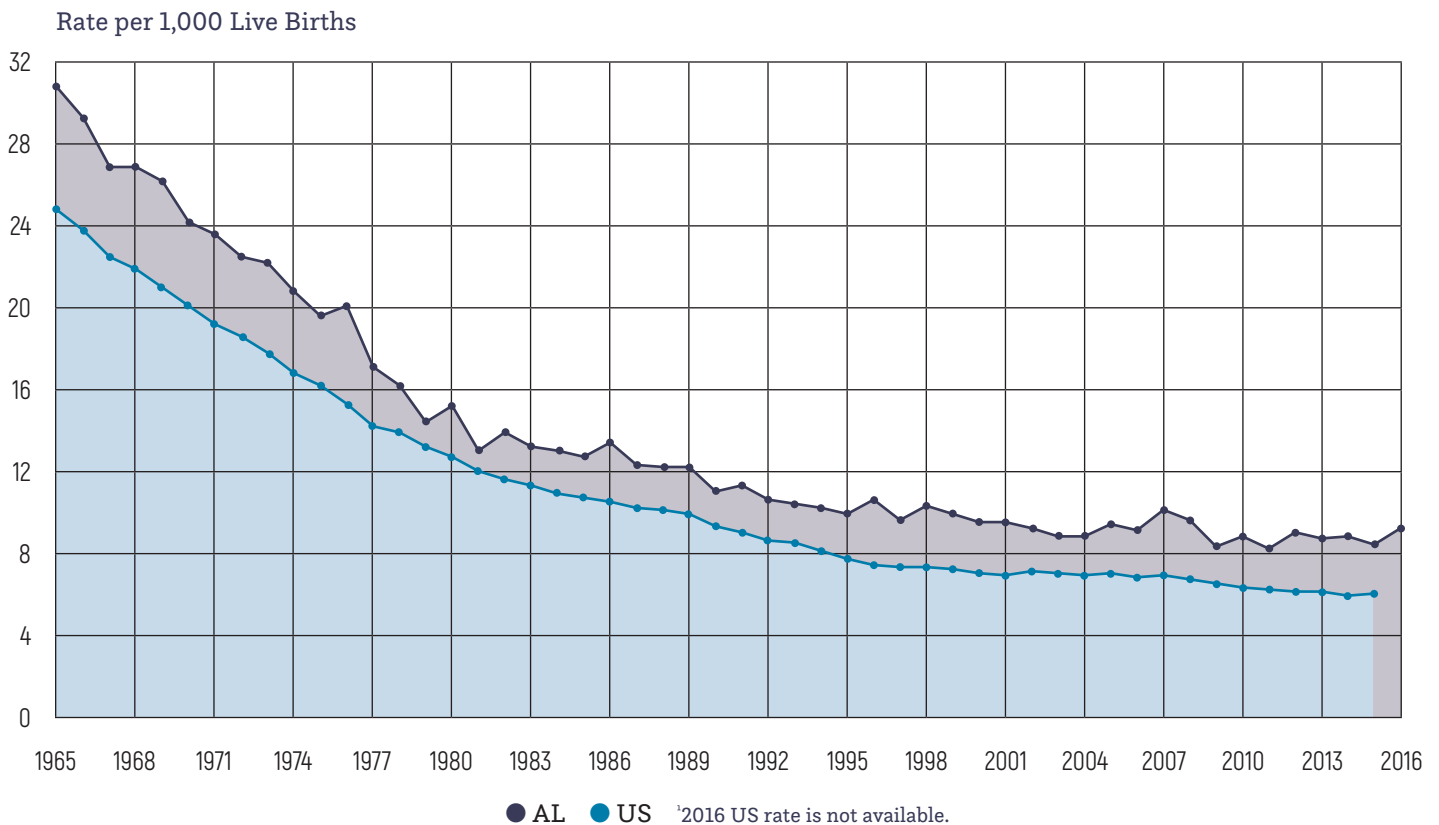
Figure 48. Comparison of Infant Mortality Rates for Alabama and the United States by Race, 2007 - 2016¹**Figure 49. Comparison of Infant Mortality Rates for Alabama and the United States, 1965 - 2016¹**

Figure 50. Alabama's Leading Causes of Death, 2016¹

Cause of Death	Rank	Number	Rate ¹	Population
Total Cause of Death		52,452		4,863,300
Heart Disease	1	12,824	263.7	
Malignant Neoplasms	2	10,419	214.2	
Chronic Lower Respiratory Diseases	3	3,325	68.4	
Cerebrovascular Diseases	4	2,962	60.9	
Accidents	5	2,747	56.5	
Alzheimer's Disease	6	2,506	51.5	
Diabetes Mellitus	7	1,181	24.3	
Septicemia	8	1,025	21.1	
Nephritis, Nephrotic Syndrome and Nephrosis	9	1,012	20.8	
Pneumonia and Influenza	10	987	20.3	
Suicide	11	786	16.2	
Chronic Liver Disease and Cirrhosis	12	781	16.1	
Essential (Primary) Hypertension	13	560	11.5	
Homicide	14	543	11.2	
Parkinson's Disease	15	505	10.4	
All Other Causes, Residual		10,289		

¹Rate is per 100,000 population.**Figure 51. Vital Statistics, 2016**

	Number	Rate
Births	59,090	12.2 (Per 1,000 Population)
Births to Teenagers	4,526	14.7 (Per 1,000 Females Aged 10-19 Years)
Low Weight Births	6,104	10.3 (Percent of All Live Births)
Births to Unmarried Women	26,408	44.7 (Percent of All Live Births)
Deaths	52,452	10.8 (Per 1,000 Population)
Marriages	34,822	7.2 (Per 1,000 Population)
Divorces	18,329	3.8 (Per 1,000 Population)
Induced Terminations of Pregnancies ¹	6,959	7.3 (Per 1,000 Females Aged 15-44 Years)
Infant Deaths (Neonatal + Postneonatal)	537	9.1 (Per 1,000 Live Births)
Neonatal Deaths (0-27 days of life)	324	5.5 (Per 1,000 Live Births)
Postneonatal Deaths (28-364 days of life)	213	3.6 (Per 1,000 Live Births)

Total estimated state population is 4,863,300.

¹The higher number of induced terminations was due to increased reporting from other states for Alabama residents.

BUREAU OF HOME AND COMMUNITY SERVICES

The Bureau of Home and Community Services administers home care services statewide. Its mission is to deliver high-quality services and compassionate care provided by competent and professional staff to patients in the home and community setting throughout Alabama. The bureau consists of the following divisions: Financial and Billing Support Services; Budget, Contracts, and Personnel; Compliance; and Home Care Services.

Patients Served

In fiscal year 2017, the Bureau of Home and Community Services served a total of 6,712 patients.

Home Health Visits

The Home Care Program provided 208,024 home health visits statewide to patients covered by Medicare, Medicaid, and third party insurance in 2017.

Alabama Medicaid recipients received a total of 215,806 home health visits. Alabama Department of Public Health (ADPH) staff provided 78 percent of the total visits in fiscal year 2017.

Figure 53. Home Health Visits by Payer, 2017

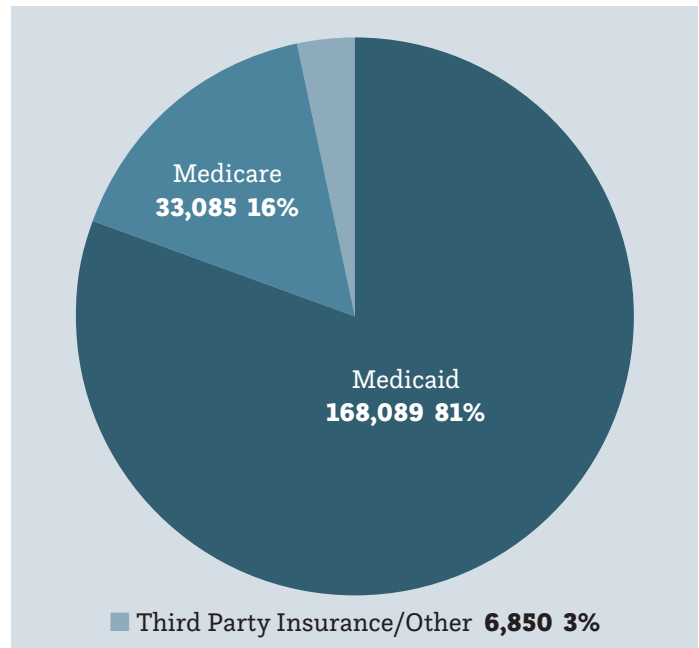


Figure 52. Home Health and Life Care Patients, 2017

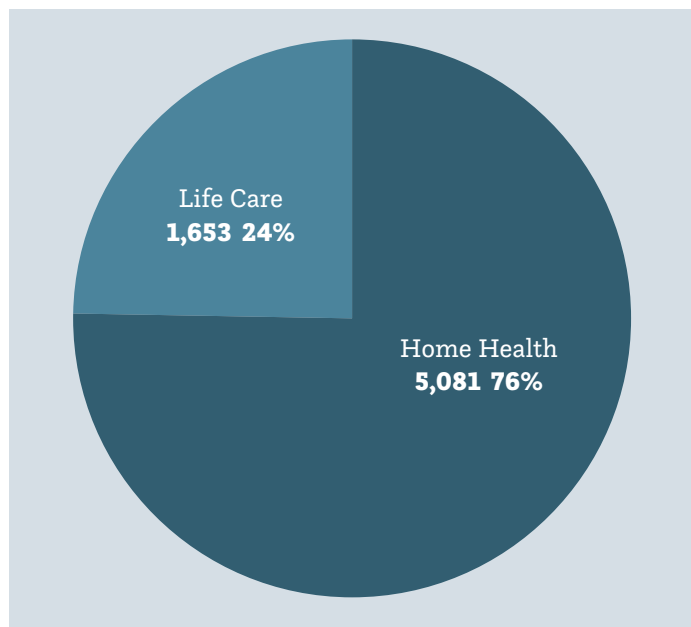
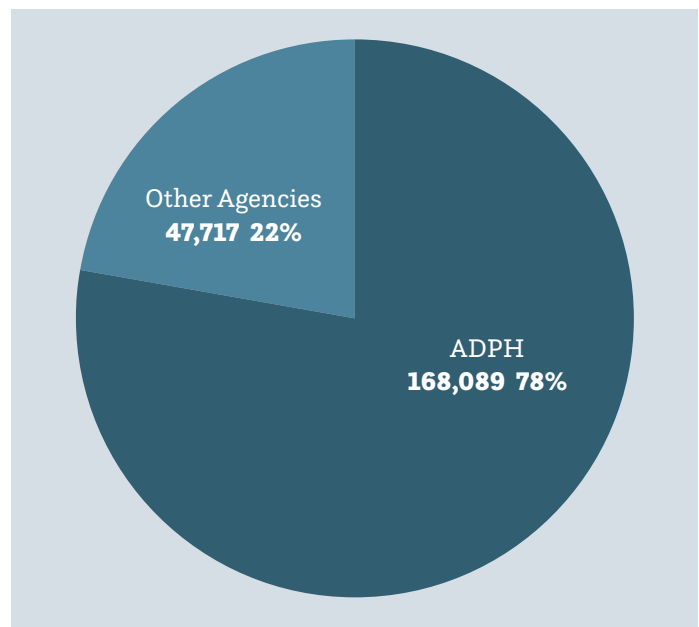


Figure 54. Alabama Medicaid Home Health Visits, 2017



Life Care Service Hours

The department's Life Care Program provided 15,383 biomonitoring hours in 2017. Nursing staff provided in-home medical monitoring for Medicaid patients diagnosed with diabetes, congestive heart

failure, and/or hypertension. Patients benefit from improved outcomes, lowered health care-related expenses, and improved compliance with the physician's plan of care.

Figure 55. Home Health Visits by Discipline, 2017

	Medicare	Medicaid	Third Party Insurance/Other	Total
Skilled Nurse	15,409	72,271	3,659	91,339
Physical Therapy	7,988	29	1,619	9,636
Speech Therapy	2	0	0	2
Occupational Therapy	10	0	1	11
Social Work	26	1	4	31
Home Health Aide	9,650	95,788	1,567	107,005
Total	33,085	168,089	6,850	208,024

OFFICE OF HUMAN RESOURCES

The Office of Human Resources reviews and processes requests for personnel actions such as new hires, promotions, transfers, dismissals, leave reports, and performance appraisals.

In addition, the office coordinates the department's recruitment program, Affirmative Action Program, and the State Employee Injury Compensation Trust Fund Program. The office provides training on human resources issues such as guidance to supervisors and employees in resolving workplace complaints; U.S. Equal Employment Opportunity Commission; Americans With Disabilities Act accommodations; shuttle requests; and coordinates (through referrals) the Employee Assistance Program. Staff review and recommend requests for disciplinary actions, participate in administrative hearings, and respond to grievances and allegations of unfair practices.

During 2017, the Office of Human Resources was instrumental in the realignment of all public health areas to public health districts effective October 1, 2017.

ADPH Minority Employment Comparison

The department is comprised of 2,885 merit system employees; 38 percent are minority employees. According to the U.S. Equal Employment Opportunity Commission's 2015 Job Patterns statistics, the department has a higher percentage of minorities compared to the Alabama labor market. *(Source: U.S. Equal Employment Opportunity Commission, www.eeoc.gov)*

Figure 56. 2017 Personnel Actions Processed for Merit Employees

New Hires	201
Promotions	132
Dismissals	12
Retirements	128
Transfers Out	40
Other Separations	137
Employee Assistance Program Referrals (Employees and Dependents)	67
Hours of Leave Donations	2,128
Annual Appraisals	2,368
Probationary Appraisals	333

Figure 57. Alabama Labor Market (LM) vs. ADPH in Three Equal Employment Opportunity Job Categories

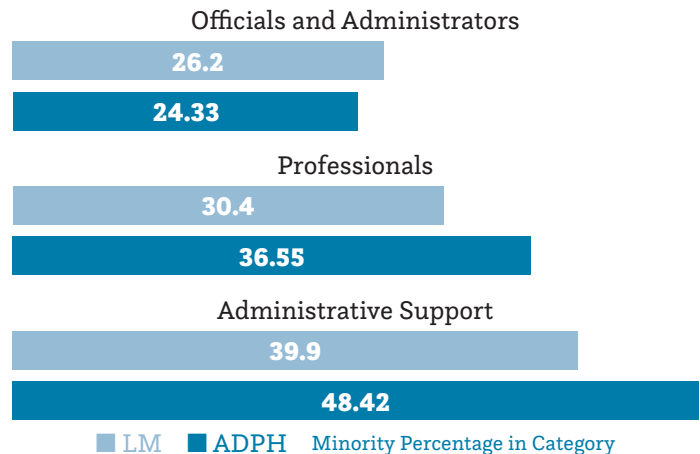


Figure 58. 2017 Turnover Rates in Areas/Counties and Central Office

	# of Merit Employees	Turnover Rate (%)
Central Office	1,215	15.80
Areas/Counties	1,670	11.73
Statewide	2,885	13.44

BUREAU OF INFORMATION TECHNOLOGY

The mission of the Bureau of Information Technology (IT) is to plan, provide, and support the information and logistics needs of the department. The bureau consists of six divisions, including Project Management Support, Database Administration, Systems Development and Integration, Business and Information Architecture, Technical Support, and Logistics. IT procures, develops, and supports information technology systems to supply information to department and public users through an integrated information processing and telecommunication structure.

The Logistics Division manages the department's property assets, forms, emergency preparedness supplies, mailroom, and vehicles. This division has the responsibility of auditing every property item assigned to the department statewide. (See Figure 61.)

IT continues to provide support for the department with the transition to the State of Alabama Accounting and Resource System (STAARS). Included in this support is a Cost Allocation system that was developed in-house to replace the AFNS Cost Allocation system. Technical support requests continue to grow as evidenced in Figure 60.

TimeTrac, an application used to capture employee time and activity for cost accounting, has been developed as a replacement for e-CATS (electronic-Cost Accounting Time Sheet), and will be implemented in fiscal year 2018.

To meet a Bureau of IT initiative, a security awareness program that provides monthly on-demand training for all department employees was developed and implemented. The on-demand training is a 5- to 10-minute video concentrating on a specific security related subject. The IT Training Section provides customized training for applications

developed within IT. This section continues to make an impact by providing in-house training for the Microsoft Office Suite. During FY2016 and FY2017, the training staff provided a combined total of 83 classes with a total enrollment of 337 students. See Figure 59 for FY2017 totals.

IT continues to work with different bureaus within the department to enhance and improve user experience, functionality, security, and responsiveness of many in-house systems.

Figure 59. Breakdown by Classes and Number of Students, 2017

	Classes	Students
Access Level 1	7	34
Access Level 2	6	27
Access Level 3	6	30
Excel Level 1	4	16
Excel Level 2	3	14
Excel Level 3	3	15
Excel Level 4	2	9
PowerPoint	1	6
Word Level 1	2	5
Word Level 2	1	4
Word Level 3	1	6

Figure 60. IT Support Facts, 2017

Help Desk Calls	27,944
Personal Computers/Laptops Supported	5,684
Windows Servers Supported	467
Personal Computers/Laptops Installed	89
WAN Support Completed Work Orders	4,428
IP Phone Devices Supported	5,187
Network Sites Upgraded	74
Smart Phones Supported	784
Technical Support Projects Completed	36
Voice Mail Boxes Supported	2,722
County Laptops Antivirus/Encryption Upgrades	289
Environmental DB Server Migration	70
Silver Peak Optimizers Virtualizations	3
DHCP Upgrades to Windows 2008 Servers	77
IP Gateways Supported	78
WAN Support Miles Driven	196,191

Figure 61. Logistics Facts, 2017

Equipment Inventory Items	18,527
Equipment Inventory Value	\$39,497,484.56
Forms Managed	1,127
Form Packages Sent	6,100
Promotional Items Managed	409
Department Vehicles	55
Emergency Response Vehicles, Trailers, etc.	92

BUREAU OF PROFESSIONAL AND SUPPORT SERVICES

The Bureau of Professional and Support Services supports a variety of important department initiatives and projects. These services include the facilitation and participation in activities to recruit, retain, and train employees within the department, and to develop and implement programs to enhance the health care workforce and health delivery infrastructure in rural and medically underserved areas in the state.

Management Support

The Office of Management Support provides leadership and coordination for critical departmental programs such as the following: Records Disposition Authority, Grant Management, Policy Clearinghouse, Institutional Review Board, Systematic Alien Verification for Entitlements, and Competitive Selection Process.

Public Health Accreditation

Since 2010, the department has been pursuing public health accreditation. National public health department accreditation is a process to measure the department's performance against a set of nationally recognized, practice-focused, and evidence-based standards defined by the Public Health Accreditation Board (PHAB). Accreditation requires an ongoing commitment to performance management and quality improvement. This process has resulted in several operational advancements such as the development of the Community Health Assessment, Community Health Improvement Plan, Alabama Department of Public Health (ADPH) Strategic Plan, Quality Improvement (QI) Council, QI Plan, and the adoption of the Turning Point Model as the performance management system.



To receive public health accreditation, a department must undergo an extensive, multi-faceted, peer-reviewed assessment process to ensure it meets or exceeds a set of quality standards and measures. In 2017, PHAB finalized a rigorous review of the documentation submitted by the department and conducted a site visit over the course of almost 5 months ending with an on-site visit by the review team assigned to the department. On June 6, 2017, the department received PHAB accreditation through the next 5 years.

Of the many comments made by the PHAB Site Visit Team, the following were the overall impressions of the department per the team:

"The ADPH is a strong, vital, and mission driven organization. It has seasoned and knowledgeable staff, who maintain strong dedication and work enthusiasm for the tasks at hand. Leadership engages staff, and staff in turn engage their partners to address the public health challenges that they mutually confront. Resource constraints are increasingly a reality confronting the department, and the Health Officer not being a gubernatorial appointment appears to be a benefit for the ADPH as it continues to leverage resources and engage in continued partnership development. While there are admitted

organizational silos and internal barriers to internal collaboration, the ongoing processes established to prepare for public health accreditation are addressing these silos, and staff appear well positioned to take advantage of newly discovered opportunities."

Quality Improvement (QI)

In 2017, ADPH made significant strides toward advancing the culture of QI by training select employees on advanced QI methods and establishing a training program for all staff. Starting in May 2017, six employees were trained on how to conduct Kaizen projects. The training spanned 3 months and included hands-on experience conducting QI training. This intense training resulted in QI experts who are now training and coaching others in how to excel in their QI efforts. As a result of this project, more than 100 employees have been trained on the tools and techniques used to perform a QI project. An additional 18 members of ADPH leadership were trained on how to support the QI efforts of their staff and encourage a culture of continuous QI.

In addition to training, the six QI experts were given hands-on experience while conducting two Kaizen projects. One project focused on decreasing the time taken to process contracts and grants with sub-recipients. The other focused on clinic wait times in one county health department. Each project has seen significant overall improvement in the process.

Additional QI projects are ongoing throughout the department featuring cultural improvements, clinic wait times, and process efficiency improvement in various areas of the health department. QI initiatives continue to build as staff are trained and see the positive outcomes from successful QI projects.

Workforce Development

The ADPH Workforce Development (WFD) Program offers training programs and initiatives designed to help departmental employees deliver high quality public health services. The goal of the WFD Program is to assure a competent public health workforce through strategic planning to anticipate and prepare the workforce for changes in public health practice through development of appropriate training programs and opportunities, both state-based and through regional and national initiatives.

Through the WFD Program, staff training is offered on a continuous basis through partners such as the State Personnel Department and the South Central Public Health Partnership. In addition to training offered through partners, the WFD Program supported staff training on specific topics such as Supervision Across Generations, Quality Improvement for Leadership: Leading an Improvement Culture, and Grant Writing Training. The WFD Program also supported a training session on Public Health Ethics at the annual Alabama Public Health Association conference.

Departmental employees participated in Toastmasters International, a world leader in communication and leadership development, in order

to hone their skills. During 2017, 34 employees participated in training sessions through the Tower Toastmasters training program. Tower Toastmasters' participants were provided a mutually supportive and positive learning environment in which each individual member had the opportunity to develop oral communication and leadership skills which in turn fostered self confidence and personal growth. Fifty-one training sessions were held, in which employees had an opportunity to communicate effectively by delivering speeches, providing and receiving performance evaluation feedback, and completing leadership projects. Participants attained a list of accomplishments, and many served in leadership roles at the local, area, division, and district levels. Demonstrating continued success, Tower Toastmasters earned the highest level of achievement from Toastmasters International in 2017, as a President's Distinguished Training Program.

In an effort to recruit and retain a highly skilled workforce, the department supports hosting students enrolled in educational institutions as interns. Through the internship program, individuals are offered an opportunity to make a positive contribution and to develop professional skills and experience. The internship experience offers an opportunity for students to learn about the role and responsibility of public health, earn educational credits, gain valuable work experience, and explore new careers in public health. The department works with various educational institutions to provide non-clinical internship placements throughout the state public health system. Through a partnership agreement with the University of Alabama at Birmingham School of Public Health, the department hosts several graduate student interns each year.

Pharmacy

In response to a growing opioid abuse public health crisis, the division helped coordinate several conferences and summits to provide education to stakeholders that included health care providers and representatives of other state agencies, community groups, law enforcement, educational institutions, and faith-based organizations. The division prepared action plans to upgrade the Prescription Drug Monitoring Program, a database of controlled substances in Schedules II-V dispensed in Alabama. The database, which can be accessed by dispensers and prescribers within the state, is a tool that can be used in providing patient care. In December, the program transitioned to a new software system. The division continues its work to make it easier for prescribers to discern between patients who legitimately need medication and those who are abusing it, promote safe opioid prescribing practices, and improve database utilization.

The division is responsible for establishing and overseeing implementation of medication dispensing policies for all county health departments. In addition, the division provides medication consultation to all public health programs including specific programs within the various bureaus, county health departments, emergency preparedness, and other state agencies on medication-related and pharmacy-

related activities. Information requested included medication storage, medication purchasing and dispensing, clinical information, scheduling of medications, health professional continuing education programs, and statutory regulations. The division also works with the Center for Emergency Preparedness in developing emergency preparedness plans and training public health employees, health care professionals, and volunteers for activation of the Strategic National Stockpile, a national repository of medications, vaccines, antidotes, and medical supplies that may be needed during a disaster.

Primary Care and Rural Health

The Office of Primary Care and Rural Health (OPCRH) administers programs to improve health care access and quality in rural and medically underserved communities. Currently, 60 of Alabama's 67 counties have areas designated as being medically underserved. These underserved areas have a high prevalence of health care issues, including chronic diseases such as diabetes, hypertension, and heart disease, and other challenges such as a high rate of substance abuse. The office employs a number of programs, and works very closely with partners such as the Alabama Rural Health Association, the Alabama Hospital Association, the Alabama Primary Care Association, and departmental bureaus to address these health issues. Some of the major programs used by the OPCRH are the recruitment and retention of health care professionals, and technical assistance to assist small rural hospitals and health providers in transitioning to a new value-based health care system.

OPCRH utilizes a national, Web-based recruitment system called 3RNet to recruit into medically underserved areas. During fiscal year 2017, approximately 246 primary care practitioners were referred to rural hospitals and clinics in Alabama. Another recruitment program is the National Health Service Corps (NHSC), which has both a scholarship and loan repayment component. The NHSC covers a wide array of health professionals, from physicians, dentists, and nurses to behavioral health professionals. These programs are supplemented by a J-1 visa waiver program, which enables placement of foreign-trained physicians in return for 3 years of service in medically underserved areas. Currently, there are over 157 health care providers delivering medical care to rural and medically underserved Alabamians under these programs. The OPCRH also assists communities in establishing Centers for Medicare and Medicaid Services certified rural health clinics. During the past year, 9 new rural health clinics were established, for a current total of 107. The OPCRH also participates with the Alabama Partnership for Telehealth and the Alabama Rural Development Office to expand health care access through partnerships and new telehealth technologies. One such initiative is a partnership with Veterans Affairs (VA) to utilize county health departments as telehealth presentation sites, allowing VA patients to receive behavioral health care closer to home. Alabama's 34 small, rural hospitals are also assisted under federal grants targeted at improving operational efficiency, quality, and hospital sustainability.

OFFICE OF PROGRAM INTEGRITY

The Office of Program Integrity is an independent appraisal arm of the department. The office serves the State Health Officer to provide assurances regarding the integrity of the department's financial systems, compliance with federal requirements, and compliance with applicable state laws and regulations. The office also serves as consultant for the programs, services, and functions of the department.

The primary mission of the Office of Program Integrity is to assist directors, managers, and administrators in effectively discharging their duties by reviewing various activities and functions within the department, presenting reports on deficiencies, and providing recommendations for corrective actions concerning those activities.

During 2017, the Office of Program Integrity continued its mission of objectively evaluating county health departments and central office units in the areas of financial and administrative activities and federal compliance.

Figure 62. Accomplishments by Audit Category, Fiscal Year 2017

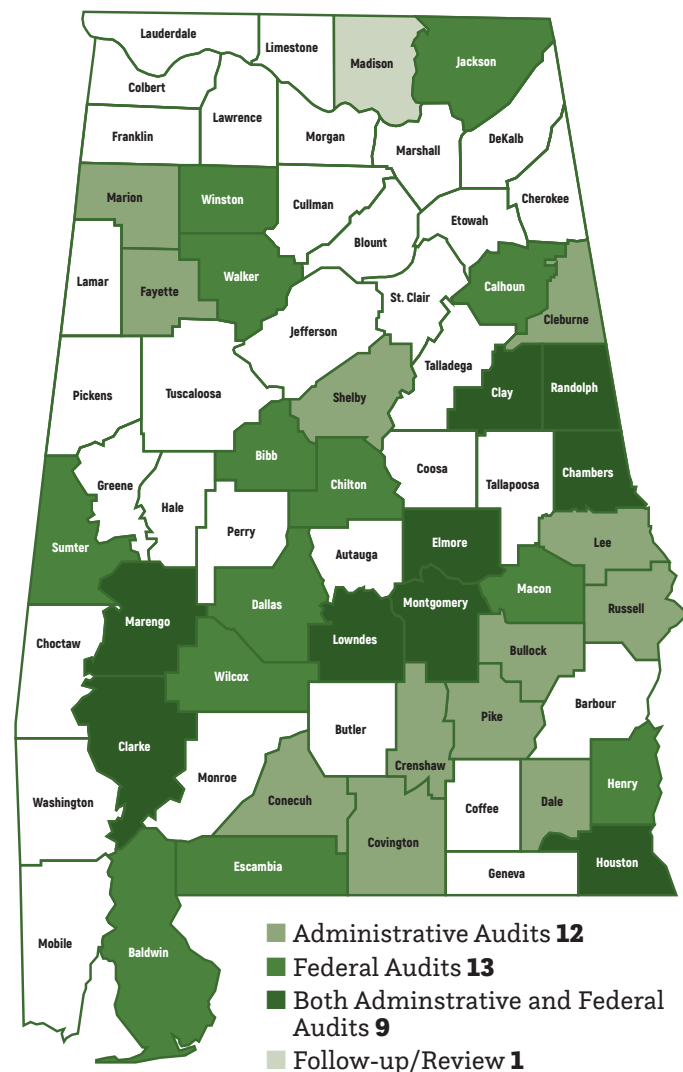


Figure 63. Accomplishments by Audit Category, Fiscal Year 2017

Financial/Administrative Audits	
County Health Departments	21
State Level Audits	3
Property Audits	21
County Health Department Follow-up/Review	1
Federal Program Audits	
County Health Departments	22
Private/Local WIC Agency Audits	1
Special Reviews and Consulting	
SAFE (Security for Alabama Funds Enhancement) Program Compliance Monitoring	
Subrecipient Compliance and Monitoring	

OFFICE OF RADIATION CONTROL

The mission of the Office of Radiation Control is to protect the public and occupationally exposed workers from unnecessary exposure to ionizing radiation. This is accomplished by registering, licensing, and inspecting the day-to-day use of ionizing radiation in the state of Alabama; working with registrants and licensees to assist them in developing and implementing programs to maintain radiation doses as low as reasonably achievable; performing routine monitoring for radioactivity in the environment; responding to incidents involving radioactive material; and conducting formal public and professional education programs.

Notable Achievements for Fiscal Year 2017

- **Radioactive Material Program:** Inspections were performed on 224 regulated facilities, 44 competency examinations were conducted, 33 competency cards were issued, and more than 900 license and registration actions were performed.
- **Medical X-Ray:** The X-Ray Compliance Branch inspected more than 1,200 X-ray tubes at more than 1,100 facilities and continues to review new uses of X-rays in medicine to help assure the health and safety of the patient and the operators of X-ray equipment.
- **Emergency Planning:** The Emergency Planning Branch provided radiation safety and emergency response training to almost 1,500 individuals. Those receiving training included individuals from the department, hospitals, emergency medical services, police, fire, and sheriff's departments, as well as volunteer members of the public.
- **Environmental:** The Environmental Radiation Branch collected more than 700 air, water, soil, and vegetation samples from areas surrounding various radioactive material licensees and the two nuclear power plants located within Alabama. More than 1,550 radiation detection devices were calibrated during fiscal year 2017. This branch also distributed more than 3,800 radon information packets and 1,350 radon test kits to the public.

Figure 64. Service Activities, Fiscal Year 2017

Type of License or Registration	Number of Facilities	Number of License and Registration Actions	Number of Inspections
Medical X-Ray	1,504	245	620
Dental X-Ray	1,295	212	154
Veterinary X-Ray	455	56	53
Academic/Other X-Ray	316	16	3
Non-Medical X-Ray	342	171	75
Radioactive Material – Industrial	207	94	90
Radioactive Material – Medical	148	156	58
Radioactive Material – Academic/Other	25	14	8
Particle Accelerators	49	47	13
Radioactive Material – General Licenses	196	29	55

COUNTY HEALTH DEPARTMENT SERVICES

Public Health services in Alabama are primarily delivered through county health departments. Larger counties and counties with specific needs have more than one county health department location. A wide variety of services is provided at county health departments, as well as valuable information.

Typical services and information include the following:

- Alabama Breast and Cervical Cancer Early Detection Program
- Bio Monitoring Services
- Birth, Death, Marriage, and Divorce Certificates
- Cancer Detection
- Child Health
- Children's Health Insurance Program (CHIP)
- Dental Services/Health Education and Community Fluoridation Programs
- Diabetes
- Disease Surveillance and Outbreak Investigations
- Family Planning
- Food and Lodging Protection
- HIV/AIDS
- Home Care Services
- Immunization
- Insect and Animal Nuisances That Can Transmit Disease to Humans
- Laboratory
- Maternity
- Nursing Services
- Nutrition Services
- Onsite Sewage Disposal Systems
- Sexually Transmitted Diseases (STDs)
- Solid Waste
- Tuberculosis
- Water Supply in Individual Residential Wells
- Women, Infants, and Children (WIC)

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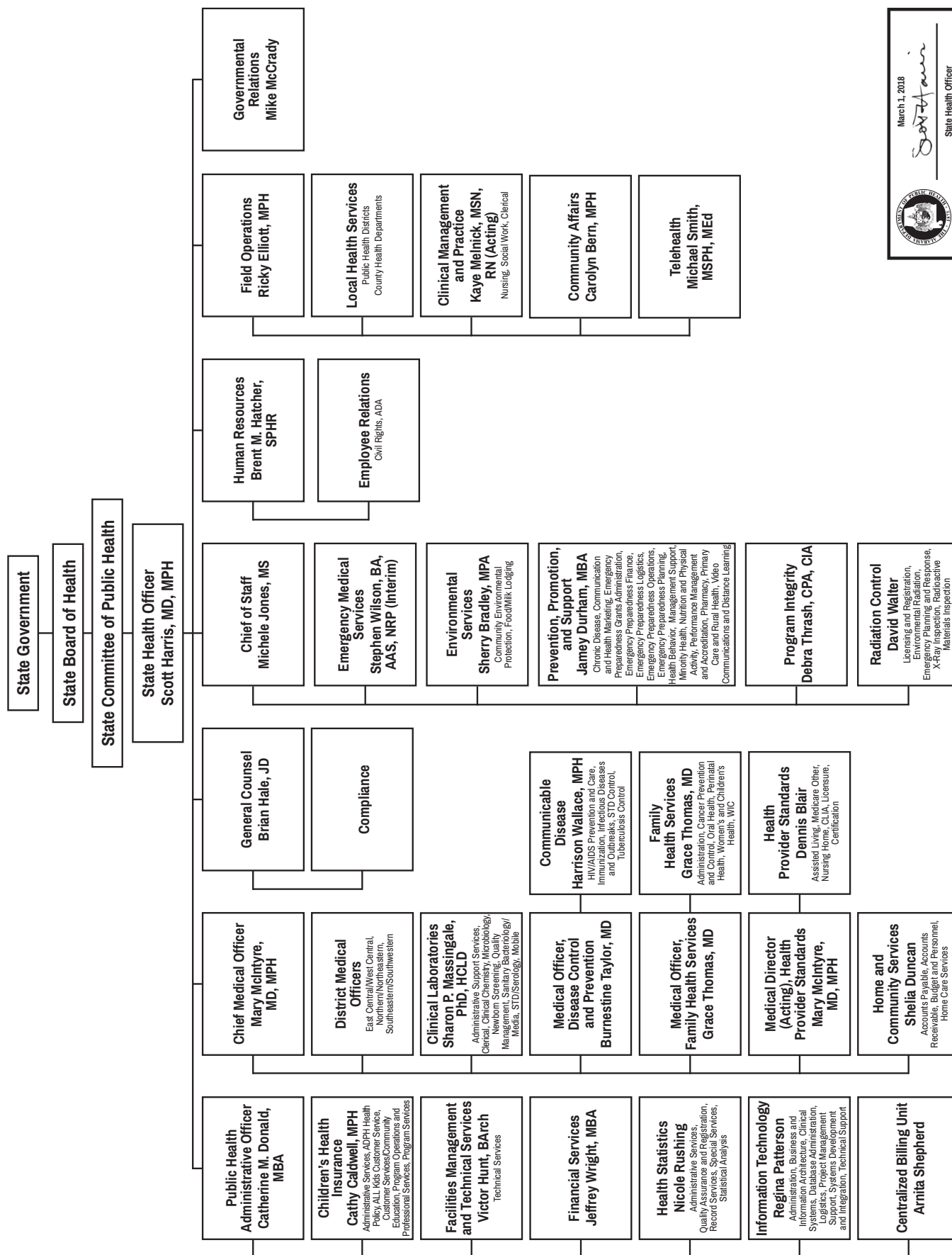
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